

**BY ORDER OF THE  
SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 11-2RC-135  
Volume 2**



**23 MARCH 2015**

***Flying Operations***

***RC/OC/WC/TC-135—AIRCREW  
EVALUATION CRITERIA***

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OPR: HQ ACC/A3TV

Certified by: AF/A3O  
(Brig Gen Giovanni K. Tuck)

Pages: 62

Supersedes: AFI11-2RC-135V2,  
2 February 2010

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This volume implements AFPD 11-4, *Aviation Service*; AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. This instruction applies to all Air Combat Command (ACC), Air National Guard (ANG) and Air Force Reserve Command (AFRC) aircrew operating the RC/OC/WC/TC-135 and establishes the minimum Air Force standards for training and qualifying personnel performing duties in the RC/OC/WC/TC-135. MAJCOMs/DRUs/FOA are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to ACC/A3C for approval prior to publication IAW AFI 11-200. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to ACC/A3C, and the user MAJCOM/DRU/FOA and NGB offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review.

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*Change of Publication*; route forms from the field through the appropriate functional's chain of command.

This publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authorities to collect and or maintain the records prescribed in this publication are Title 10, United States Code, Chapter 857 and Executive Order 9397, Numbering System for Federal Accounts Relating to Individual Persons, November 22, 1943.

Forms affected by the PA have an appropriate PA statement. System of records notice F011 AF XO A, Aviation Resource Management System (ARMS) (December 26, 2002, 67 FR 78777) applies. Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

## ***SUMMARY OF CHANGES***

This volume has been substantially reformatted and must be thoroughly reviewed. Other major changes are: Applicability to Air Reserve Command units and members is changed, requirements for Senior Staff Officer evaluations are included and guidance regarding difference evaluations is updated to reflect AFI 11-2RC-135V1.

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## Chapter 1

### GENERAL INFORMATION

**1.1. General.** This volume provides flight examiners (FEs) and aircrews with procedures and evaluation criteria/tolerances to be used during flight and ground phases of initial and periodic evaluations. All RC/OC/WC/TC-135 evaluations will be conducted according to this volume and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, as supplemented. Specific areas for evaluation are prescribed to ensure an accurate assessment of the proficiency and capabilities of aircrews. Flight examiners will use this AFI when conducting aircrew evaluations.

1.1.1. Objective. The examinee must satisfactorily demonstrate the ability to perform required duties safely and effectively, including the operation of appropriate aircraft systems in accordance with applicable technical orders, instructions, and directives.

1.1.2. Requirements. Evaluate all crewmembers on areas listed in [Table 3.1](#) and all instructors on areas listed in [Table 3.2](#). Crew position specific requirements are listed in [Table 4.1](#), [Table 5.1](#), [Table 6.1](#), [Table 7.1](#), [Table 8.1](#) and [Table 9.1](#).

### 1.2. Key Words and Definitions.

1.2.1. "Will" and "Shall" indicate a mandatory requirement.

1.2.2. "Should" is normally used to indicate a preferred, but not mandatory, method of accomplishment.

1.2.3. "May" indicates an acceptable or suggested means of accomplishment.

**1.3. Recommendation for Change of Publication.** Recommendations for improvements to this volume will be submitted on AF Form 847, *Recommendation for Change of Publication*, IAW AFI 11-215, *Flight Manuals Program*, to HQ ACC/A3TV. Approved recommendations will be collated into interim or formal change notices, and forwarded to HQ USAF/A3O-AT for HQ USAF/A3 approval.

**1.4. Waivers.** IAW AFI 11-202V2 and the ACC Sup, waiver requests must be routed through the Numbered Air Force (NAF) for comment. Waiver approval authority for RC/OC/WC/TC-135-specific aircrew requirements is HQ MAJCOM/A3 (ANG: NGB/A3), unless otherwise specified in this volume. (ANG: 170 OSS/CC will be notified when situations require an OG/CC or SQ/CC approval/waiver.) All waiver requests must include the following, as applicable:

1.4.1. Name, rank, crew position, type aircraft, type of evaluation, expiration date and applicable paragraph.

1.4.2. Justification for waiver

1.4.3. Unit plan of action

### 1.5. Evaluation Procedures: (T-2).

1.5.1. Flight Examiners (FEs) will use the grading policies contained in AFI 11-202V2 and the evaluation criteria in this instruction for conducting all ACC and ACC-oversight units RC/OC/WC/TC-135 Flight, Aircrew Training Device (ATD), and Emergency Procedures

Evaluations (EPE). All evaluations assume smooth air, a stable platform, and normal operating conditions. Compound emergency procedures will not be used.

1.5.2. All evaluations fall under the Qualification (QUAL), Instrument (INSTM), Mission (MSN), Instructor (INSTR) or SPOT categories listed in AFI 11-202V2. Each squadron may design and maintain evaluation profiles for each Mission Design Series (MDS) that include information on each crew position. These profiles will be approved by OGV and will incorporate requirements set in the applicable grading criteria and reflect the primary unit tasking.

1.5.3. Schedule all evaluation activity on one sortie and an operational aircraft to the greatest extent possible. All flight phase requirements should be accomplished in-flight. If a required event is not accomplished in-flight, OG/CC is the waiver authority for the event to be completed in the ATD (must be SIMCERT 1 (Simulator Certification Level 1) or TVC 1 (Training Value Code 1). This authority may be delegated no lower than SQ/CC unless otherwise authorized in position specific chapters of this AFI.

1.5.4. During all evaluations, any grading areas observed by the evaluator may be evaluated. If additional training is required for areas outside of the scheduled evaluation, document the training required under the appropriate area on the AF Form 8, *Certificate of Aircrew Qualification*.

1.5.5. Each chapter in this AFI contains a table of requirements for various evaluations. The NOTES column of each table may include an "X" which refers to a general note found in the individual grading criteria, and/or a number which refers to a note shown below the table. To complete an evaluation, all areas annotated with an "R" must be successfully completed.

1.5.6. Unit flight examiners may give evaluations outside of their organization to include administering evaluations between ACC and ANG.

1.5.7. Momentary deviations from tolerances will not be considered in the grading, provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. Cumulative deviations will be considered when determining the overall grade. Deviations incurred while employing the "See and Avoid" concept will be considered momentary deviations. The FE will state the examinee's overall rating, thoroughly critique specific deviations, area grades assigned and assign any required additional training.

1.5.8. FEs will not evaluate students with whom they have flown 50% or more of the qualification/upgrade training or those they recommend for qualification/upgrade flight evaluation without a waiver IAW AFI11-202V2\_ACCSUP.

## **1.6. General Evaluation Guidance (T-2)**

1.6.1. Mission Evaluation. IAW AFI 11-202V2 the requirement for a separate mission (MSN) evaluation is waived. All QUAL evaluations will contain a mission scenario. The scenario should be incorporated through the flight portion of the evaluation as much as possible.

1.6.1.1. For aircrew qualified in multiple missions, recurring evaluations need only evaluate the primary mission events as long as currency is maintained in all other required training events.

1.6.2. Instrument Evaluations. Instrument evaluations apply to pilots. See [Chapter 4](#) of this volume for specific requirements. General instrument procedures should be evaluated in the ATD in conjunction with the EPE.

1.6.3. Qualification Evaluations. These evaluations should be combined with Instrument evaluations, as applicable for the crew position.

1.6.4. No-Notice Evaluations. OG/CC will determine no-notice evaluation procedures/goals.

1.6.5. Difference Evaluations. Difference evaluations that do not update an eligibility zone will be listed as “SPOT” on the front of the AF Form 8 and explained as a difference evaluation under “Mission Description”. These evaluations may be used to qualify crewmembers in a different system/tactic (e.g. baseline or avionic upgrades) within the same aircraft. In addition they may be used to qualify mission crew personnel already qualified in one crew position in a subsequent crew position within the same MDS and crew specialty.

1.6.5.1. The OG/CC will determine whether a difference evaluation or certification is required after difference training. Specific instances requiring a difference evaluation is in each position specific evaluation criteria chapter and AFI 11-2RC-135 Volume 1, *RC/OC/WC/TC-135—Aircrew Training*.

1.6.6. Qualification in more than one RC/OC/WC/TC-135 aircraft does not require MAJCOM/A3 authorization. All -135s are considered the same MDS for basic qualification purposes. However, crewmembers flying multiple models (i.e. RC-135 V/W, RC-135S, and RC-135U or WC-135 and OC-135, etc) may need to obtain qualification or certifications in the various models depending on the requirements listed in this AFI and AFI 11-2RC-135V1.

1.6.7. Instructor Evaluations.

1.6.7.1. Initial Instructor flight evaluations should be conducted with a student occupying the applicable aircrew position whenever possible.

1.6.7.2. The instructor examinee will monitor all phases of flight from an advantageous position and be prepared to demonstrate or explain any area or procedure. The FE will particularly note the instructor's ability to recognize student difficulties and provide effective, timely corrective action.

1.6.7.3. The FE should also evaluate the grade assigned and TAPR (Training Accomplishment Report) completed for the student on all initial instructor checks.

1.6.7.4. The student will perform those duties prescribed by the instructor for the sortie being accomplished. If an actual student is not available, the FE will identify to the examinee (prior to the mission) the level of performance to be expected from the FE acting as the student. If this option is utilized, at least one event or briefing must be instructed.

1.6.7.5. Periodic instructor evaluations will be administered in conjunction with required qualification and instrument flight evaluations. The examinee must occupy the primary duty position for an adequate period of time to demonstrate proficiency in the crew position with required qualification and instrument flight evaluations.

1.6.7.6. All instructor evaluations will include a pre-flight and post-flight briefing.



#### 1.6.8. Senior Staff Officer (SSO) Evaluations

1.6.8.1. For evaluations of members in the SSO training program, annotate the crew position on the AF Form 8 as either FP (pilot), FN (navigator), FE (EWO), or FA (IIO) IAW AFI 11-401\_ACCSUP\_I, *Aviation Management*.

1.6.8.2. Add the following restriction in the remarks section of the AF Form 8: “RESTRICTION: This evaluation permits operating the aircraft from the primary crew position only under direct supervision of an instructor (fill in appropriate crew position).”

1.6.8.3. Check the crew position tables in subsequent chapters for areas exempt from evaluation.

## Chapter 2

### GROUND REQUISITES

**2.1. General.** Ground requirements for instrument, qualification and mission evaluations are listed in this chapter. Flight requirements are in position specific chapters.

**2.2. Ground Phase Requisites (T-2).** Requirements listed in [Table 2.1](#) are common to all crew positions and will be accomplished IAW AFI 11-202V2, as supplemented, and unit directives. These should be accomplished prior to the flight phase.

2.2.1. Publications Check. The publications check is a requisite to all qualification evaluations, and will be annotated in the Comments block of the AF Form 8 only if unsatisfactory. Annual and Change LEP checks in individually issued flight manuals must be accomplished, documented, and current. Unit OGV will list the required flight publications each aircrew member is responsible for in the local supplement to AFI 11-202V2.

**Table 2.1. Crew Position Specific Requisites.**

Test Type	Pilot		Navigator	EWO	Mission Crew
	QUAL	INSTM	QUAL	QUAL	QUAL
OPEN BOOK <sup>1</sup>	R		R	R	R
CLOSED BOOK <sup>2</sup>	R		R	R	R
Instrument		R	R		
EPE	R		R	R	R
BOLDFACE	R				
<b>NOTES:</b> 1. This exam consists of 50-100 questions derived from applicable flight manuals and governing directives. OG/OGV will determine the necessary number of questions to be included for each MDS and crew position.  2. This exam consists of 25-50 questions derived from applicable flight manuals and governing directives. OG/OGV will determine the necessary number of questions to be included for each MDS and crew position.					

2.2.2. Emergency Procedures Evaluations (EPE). Every Qualification evaluation which updates an expiration date will include an EPE. For pilots, the FE will administer the EPE in the ATD when available. Document the method of EPE accomplishment in the Comments block of the AF Form 8. For all other crewmembers, an EPE will be accomplished orally and Emergency Procedures grading criteria will be used to evaluate this event. Units will determine scenarios for EPEs. The FE will assign an overall EPE grade (1 or 3) in the qualification ground phase block of the AF Form 8.

## Chapter 3

### GENERAL GRADING INSTRUCTIONS AND AREAS

**3.1. Grading Instructions and General Grading Criteria (T-2).** Standards and performance parameters are contained in AFI 11-202V2 and this instruction. A three-level grading system (Q, Q-, and U) is used for most areas; however a "Q-" grade will not be indicated under critical areas.

3.1.1. Critical Areas. Critical areas are events that require adequate accomplishment by the examinee in order to successfully achieve the sortie objectives and complete the evaluation. If an examinee receives a "U" grade in any critical area, the overall grade for the evaluation will be "Q-3." Critical areas are identified by "(CRITICAL)" following the applicable area title.

3.1.2. Non-critical Areas. If an examinee receives a "U" grade in a non-critical area then the overall grade awarded will be no higher than "Q-2." An examinee receiving a "Q-" grade in a non-critical area or areas may still receive a "Q-1" overall grade at evaluator discretion. An overall "Q-3" can be awarded if, in the judgment of the flight examiner, there is justification based on performance in one or several areas/sub areas.

3.1.3. The FE must exercise judgment when the wording of areas is subjective and when specific situations are not covered.

3.1.4. Evaluator judgment will be the final determining factor in deciding the overall qualification level.

**3.2. General Grading Criteria (T-2).** [Table 3.1](#) lists general areas to be evaluated for all applicable evaluations. The following general qualification criteria are common to all crew positions and will be used for all applicable evaluations:

**Table 3.1. General Grading Areas (All Crew Positions).**

AREA	DESCRIPTION
1	Equipment/Publications
2	Mission Planning
3	Checklist Procedures
4	Emergency Procedures
5	Airmanship (CRITICAL)
6	Safety (CRITICAL)
7	Aircrew Discipline (CRITICAL)
8	Crew Resource Management (CRM)/Crew Coordination
	Postflight/Debrief
	Communications, Logs, and Reports

#### 3.2.1. AREA 1, EQUIPMENT/PUBLICATIONS

3.2.1.1. **Q.** Possessed all required personal/professional equipment and publications. Maintained equipment in serviceable condition. Publications are current and properly posted according to directives.

3.2.1.2. **Q-**. Possessed all required personal/professional equipment and publications. Maintained equipment in serviceable condition. Publications are current but posted with omissions, deviations, or errors which detracted from sortie execution. Did not jeopardize sortie success.

3.2.1.3. **U**. Failed to possess personal/professional equipment or to maintain equipment in serviceable condition. Publications are not current, or posted with major omissions, deviations, or errors. Jeopardized sortie success.

### 3.2.2. **AREA 2, MISSION PLANNING**

3.2.2.1. **Q**. Developed a plan considering mission objectives, specific action points, and aircraft/ crew capabilities. Complied with procedures prescribed by the flight manual and other applicable directives. Checked all Flight Crew Information Files (FCIFs) Vol 1, Part B, logged off in PEX or as applicable. Complied with local directives and participated in all required briefings. Mission planning was adequate with no more than minor omissions, deviations or errors which did not impact planned sortie success.

3.2.2.2. **Q-**. As above, but did not fully comply with directives. Omissions, deviations or errors detracted from planned sortie execution. Did not jeopardize sortie success.

3.2.2.3. **U**. Failed to check FCIF, Vol 1, Part B and/or annotate correctly. Failed to comply with local directives or participate in all required briefings. Mission planning was inadequate and/or jeopardized planned sortie success.

### 3.2.3. **AREA 3, CHECKLIST PROCEDURES**

3.2.3.1. **Q**. Checklist items and procedures required by the flight manual and applicable directives were accomplished in a thorough and proficient manner with no more than minor omissions, deviations or errors which did not impact sortie success.

3.2.3.2. **Q-**. Checklist items and procedures required by the flight manual and applicable directives were accomplished with omissions, deviations, or errors which detracted from sortie execution. Did not jeopardize sortie success.

3.2.3.3. **U**. Checklist items and procedures required by the flight manual and applicable directives were accomplished with major omissions, deviations, or errors. Jeopardized sortie success.

### 3.2.4. **AREA 4, EMERGENCY PROCEDURES**

3.2.4.1. **Q**. Recognized actual/simulated malfunctions. Applied proper corrective actions. Effectively used checklist/flight manual. Thoroughly familiar with additional emergency duties. Effectively coordinated emergency actions with other crewmembers without delay or confusion. (This area may be evaluated orally.)

3.2.4.2. **Q-**. Recognized actual/simulated malfunctions. Slow response to non-Bold Face situations or follow-on steps. Procedures were correct, but examinee was slow to locate required checklist/flight manual data. Slow or hesitant to coordinate emergency actions with other crewmembers.

3.2.4.3. **U**. Unsatisfactory knowledge of emergency procedures/equipment. Misunderstood or unaware of additional emergency actions. Improperly or ineffectively coordinated emergency actions with other crewmembers causing delay or confusion.

**3.2.5. AREA 5, AIRMANSHIP (CRITICAL)**

3.2.5.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension.

3.2.5.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that safety could have been compromised.

**3.2.6. AREA 6, SAFETY (CRITICAL)**

3.2.6.1. **Q.** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.

3.2.6.2. **U.** Was not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Did not adequately clear. Operated the aircraft in a dangerous manner.

**3.2.7. AREA 7, AIRCREW DISCIPLINE (CRITICAL)**

3.2.7.1. **Q.** Demonstrated strict professional flight and aircrew discipline throughout all phases of the mission.

3.2.7.2. **U.** Failed to exhibit strict flight or aircrew discipline. Violated or ignored rules or instructions.

**3.2.8. AREA 8, CREW RESOURCE MANAGEMENT (CRM)/CREW COORDINATION**

3.2.8.1. **Q.** Effectively coordinated with other aircrew members. Demonstrated basic knowledge of other crewmembers' duties and responsibilities. Provided timely direction or information, as required, which clarified/rectified a situation. Efficiently used available resources to manage workload and maximize mission success.

3.2.8.2. **Q-.** Adequate coordination with other aircrew members, but demonstrated limited knowledge of other crewmembers' basic duties/responsibilities. Showed some hesitation to provide timely direction/information which would have clarified confusion or rectified a situation. Use of available resources to manage workload limited mission success.

3.2.8.3. **U.** Coordination with other aircrew members and lack of knowledge of their duties/responsibilities were detrimental to flight safety or mission effectiveness. Did not provide timely direction/information which would have clarified/rectified a situation. Did not use available resources to manage workload.

**3.2.9. POSTFLIGHT/DEBRIEF**

3.2.9.1. **Q.** Satisfactory knowledge and performance of required procedures. Attended and fully participated in required debrief(s). Ensured AFTO 781 was completed and satisfactorily debriefed required personnel.

3.2.9.2. **Q-.** Incomplete knowledge of required procedures. Attended/participated in required debrief(s), but hesitant to make appropriate inputs. AFTO 781 entries and required debriefing(s) were not complete or thorough.

3.2.9.3. **U.** Unsatisfactory knowledge of required procedures. Major deviations in procedures. Failed to attend or participate in required debrief(s). Failed to complete or ensure completion of AFTO 781 and required debrief(s).

### 3.2.10. COMMUNICATIONS, LOGS, AND REPORTS

3.2.10.1. **Q.** Communicated required information within the aircraft and with external agencies. Communications were clear, concise, timely, and used standard terminology/format. All logs, reports, media and forms required were completed in accordance with applicable directives, tasking and policy. Information was provided in sufficient detail to allow accurate and timely analysis of associated data. Complied with security procedures.

3.2.10.2. **Q-.** As above but with minor deviations, omissions or errors which did not significantly impact the planned mission. Complied with security procedures.

3.2.10.3. **U.** Major deviations, omissions or errors which significantly impacted the planned mission. Communications caused confusion or delay. Logs, reports, media or forms required contained errors or omissions precluding analysis of mission data. Failed to comply with security procedures.

**3.3. Instructor Grading Criteria (T-2).** Table 3.2 lists areas to be evaluated for all instructor evaluations. Awarding a "U" in any of the Instructor Grading Criteria areas will result in a Q-3 for the overall instructor grade. The overall grade for the instructor portion of the evaluation will be no higher than the lowest overall grade awarded under QUAL/INSTM. The following qualification criteria are common to all crew positions and will be used for all instructor evaluations:

**Table 3.2. Instructor Grading Areas.**

AREA DESCRIPTION
Instructional Ability
Briefings/Critique
Demonstration and Performance

#### 3.3.1. INSTRUCTIONAL ABILITY

3.3.1.1. **Q.** Demonstrated ability to communicate effectively. Provided appropriate corrective guidance when necessary. Planned ahead and made timely decisions. Correctly analyzed student errors.

3.3.1.2. **Q-.** Minor discrepancies in the above criteria that did not adversely impact student progress.

3.3.1.3. **U.** Unable to effectively communicate with the student. Did not provide corrective action where necessary. Did not plan ahead or anticipate student problems. Incorrectly analyzed student errors. Adversely impacted student progress.

#### 3.3.2. BRIEFINGS/CRITIQUE

3.3.2.1. **Q.** Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Demonstrated ability during critique to reconstruct the flight, offer mission analysis, and provide

corrective guidance where appropriate. Completed all training documents according to prescribed directives. Appropriate grades awarded.

3.3.2.2. **Q-**. As above but with minor errors or omissions in briefings, critique, or training documents that did not adversely impact student progress.

3.3.2.3. **U**. Briefings were marginal or nonexistent. Did not review student's training folder or past performance. Failed to adequately critique student or conducted an incomplete mission analysis which compromised learning. Student strengths or weaknesses were not identified. Adversely impacted student progress. Inappropriate grades awarded. Overlooked or omitted major discrepancies.

### 3.3.3. **DEMONSTRATION AND PERFORMANCE**

3.3.3.1. **Q**. Effectively demonstrated procedures and techniques on the ground and in-flight. Demonstrated thorough knowledge of aircraft systems, procedures, and all applicable publications and regulations.

3.3.3.2. **Q-**. Minor discrepancies in the above criteria that did not adversely impact student progress.

3.3.3.3. **U**. Did not demonstrate correct procedure or technique. Insufficient depth of knowledge about aircraft systems, procedures, or proper source material. Adversely impacted student progress.

## Chapter 4

### PILOT EVALUATIONS

**4.1. General.** Grading criteria contained herein cannot cover every situation. Written parameters must be tempered with sortie objectives, evaluator judgment, and task accomplishment in the determination of overall aircrew performance. Specific requirements for each evaluation are as follows:

**4.2. Qualification Evaluations (T-2):**

4.2.1. Ground Requisites: See [Table 2.1](#)

4.2.2. Flight Phase: All areas required in [Table 4.1](#) under AC (Aircraft Commander qualification) or PQ (Pilot qualification) will be evaluated, unless not applicable to the specific aircraft as noted. During recurring evaluations for aircraft commanders, a right seat approach and landing is required. Any approach work (exceptions: Areas 26 Landing and 29 Simulated Engine Out Pattern/Landing) not completed on the scheduled sortie may be completed in the ATD (if available) with OG/CC approval.

4.2.3. Copilots initially upgrading to aircraft commander will have a qualified IP (desired) or FE (secondary) in the copilot's position during critical phases of flight.

**4.3. Mission Certifications (T-2).** Mission Certifications ensure that individuals are capable of performing duties essential to the effective employment of the aircraft. Mission Certifications are accomplished IAW local training requirements and/or SQ/CC directions. Mission certification flight events are normally performed during Qualification evaluations, but may be performed on any flight with an instructor certified in that mission.

4.3.1. Multiple Mission Certifications. When authorized by the OG/CC IAW 11-2RC-135V1, to establish or maintain mission certifications in more than one -135 model, use the following guidance. To add an additional -135 model (RC/OC/WC), a separate mission certification for that model will be accomplished. Some model transitions may require a difference evaluation, see [paragraph 4.5](#) for further guidance. To initially mission certify in more than one -135 model, or for recurring evaluations of pilots mission certified in more than one -135 model, complete flight evaluation IAW AFI 11-202V2. Ensure Qualification Examination(s) and Emergency Procedures Examination(s) cover all applicable models and mission requirements. For aircraft commanders mission certifying in a model with reversers, reverse thrust landing must be evaluated in a reverse thrust equipped aircraft for initial Qualification evaluations.

4.3.2. Qualification in either F108 or TF-33 aircraft will be initiated by initial qualification in one engine type, followed by a difference qualification in the other. Subsequent annual qualification evaluation in one engine type will satisfy requirements for both types of aircraft, provided ground testing encompasses both aircraft types and the individual is current in both engine types.

**4.4. Instrument Evaluations (T-2):**

4.4.1. Ground Requisites. Instrument Examination.

4.4.2. Flight Phase. All areas required in [Table 4.1](#) under "INSTM" will be evaluated.



**4.5. Difference Evaluations (T-2):**

4.5.1. Ground Requisites: Closed Book exam with Boldface.

4.5.1.1. Pilots transitioning from the KC-135 or 707 series aircraft models to an RC/OC/WC/TC-135, require an Open Book, Closed Book, Boldface, and EPE. The EPE should emphasize the difference between models.

4.5.2. Flight Phase: Required transitions will be IAW AFI 11-2RC-135V1. The following transitions also require a flight evaluation. Evaluate applicable items in [Table 4.2](#)

4.5.2.1. Transition from non-reverser equipped aircraft to an aircraft model with thrust reversers. Flight Phase for Thrust Reverser Engines transition consists of Landing (reverse thrust) and Simulated Engine Out Pattern/Landing (reverse thrust) (AC/IP only).

4.5.2.2. Pilots not qualified in receiver air refueling who seek qualification for receiver air refueling. Flight Phase for air refueling transition consists of AR/Receiver.

**4.6. Instructor Evaluations (T-2).** Pilots receiving initial instructor evaluations must occupy the right seat for evaluation of takeoff, air refueling, initial buffet (ATD only), and all traffic pattern activity. An IP or FE must occupy the left seat. On recurring checks, instructors may occupy either seat to accomplish required items in [Table 4.1](#). A student, pilot, copilot, IP, or FE may occupy the opposite pilot position. All "INSTR" areas must be evaluated. In all cases, the examinee will occupy the position normally required to instruct, and will perform all tasks as demonstration items.

4.6.1. Instructor examinees will accomplish the following demonstrations:

4.6.1.1. Air refueling envelope demonstration.

4.6.1.2. Approach to initial buffet (Initial C-135 Instructor Check; accomplish only in the ATD).

4.6.1.3. 30 Flap landing.

4.6.1.4. Touch and Go landing.

4.6.2. Grade demos using the criteria for Area 38, Demonstration and Performance. To receive a Q grade for the air refueling envelope demo the examinee must satisfy Area 19 criteria. To receive a Q grade for the 30 Flap landing/Touch and Go landing, the examinee must satisfy the criteria for Area 26, Landing, and Area 27, Touch and Go landings. Unsatisfactory performance may result in U grades for both areas depending on the nature of the discrepancy.

4.6.3. Instructor Requalification Evaluations. Will be IAW AFI 11-2RC-135V1 and AFI 11-202V2. Follow guidance for Recurring Instructor Evaluations.

**4.7. Emergency Procedures Evaluations (T-2), additional guidance:**

4.7.1. Qualification EPEs will evaluate the pilot's performance of all Boldface Procedures, a cross section of noncritical emergency procedures, and knowledge and performance of general systems operation. EPE events and requirements IAW 55 OG Evaluation Profile Letter.

**4.8. Pilot Evaluation Requirements (T-2):**

4.8.1. **Table 4.1** lists areas for pilot or copilot qualification, instrument, and instructor evaluations. (AC=Aircraft Commander Qual, PQ=Pilot Qual).

4.8.2. **Table 4.2** lists areas for pilot or copilot difference flight evaluations and mission evaluations.

**Table 4.1. Pilot Evaluation Requirements.**

AREA/TITLE	NOTES	AC	PQ	INSTM	INSTR
1. Equipment/Publications		R	R		
2. Mission Planning		R	R		
3. Checklist Procedures		R	R		
4. Emergency Procedures		R	R		
5. Airmanship (Critical)		R	R		
6. Safety (Critical)		R	R		
7. Aircrew Discipline (Critical)		R	R		
8. CRM/Crew Coordination		R	R		
9. Briefings		R			
10. Pre-Takeoff		R	R		
11. Takeoff	10	R	R		
12. Departure/Climb(IFR/VFR)	10,X	R	R		
13. Cruise/Navigation		R	R		
14. In-Flight Checks		R	R		
15. ATC Communications/IFF/SIF		R	R		
16. Unusual Attitudes	3			R	
17. Holding	2,8			R	
18. Communications, Logs, and Reports		R	R		
19. Air Refueling	1,8,X	R	R		
20. Descent(Enroute or Published)	10	R	R		
21. IFR Pattern(prior to FAF)				R	
22. Precision Approach (GP-DA)				R	
23. Non-Precision Approach (FAF-MAP)	6			R	
24. Missed Approach	X			R	
25. VFR Traffic Pattern	X	R	R		
26. Landing	4	R	R		

27. Touch and Go landings	X	R	R		
28. Go Around	X	R	R		
29. Simulated Engine Out Pattern/landing	8	R			
30. Engine Failure During Takeoff or Climbout After Takeoff	8,9	R			
31. Simulated Engine Out Go-Around	8	R			
32. Emergency Procedures--Boldface (Critical)		R	R		
33. Systems Knowledge/Operation		R	R		
34. After Landing		R	R		
35. Postflight/Debrief		R	R		
36. Instructional Ability	7				R
37. Instructional Briefing/Critique	7				R
38. Demonstration and Performance	7, 5				R

**NOTES:**

1. Includes practice emergency separations. Non-instructor aircraft commander qualification evaluations can be completed without air refueling (AR) qualification at OG/CC discretion. Complete an inflight refueling evaluation prior to certifying a pilot to conduct air refueling unsupervised. To qualify as an AR instructor, complete an inflight evaluation consisting of AR instruction and AR limits demo, using both this area and Instructor Grading criteria. AR during an initial IP check will be flown from the right seat.

2. Holding may be accomplished in the ATD.

3. Unusual Attitudes will be accomplished in the ATD.

4. Include reverse thrust evaluation (if equipped).

5. All demonstration items will be accomplished in accordance with paragraph 4.6. of this instruction.

6. TACAN, Localizer (LOC)/VOR, ASR or GPS/RNAV/NDB (if installed)

7. Grading criteria IAW paragraph 3.3. of this instruction.

8. Not required for SSOs

9. Engine Failure During Takeoff or Climbout After Takeoff may be accomplished in the ATD.

10. May be accomplished in the ATD for PQ evaluations.

X. Refers to a general note found in the individual grading criteria.

**Table 4.2. Difference Evaluation Requirements.**

AREA/TITLE	NOTES	RC/TC	OC/WC
1. Equipment/Publications		R	R
2. Mission Planning		R	R
3. Checklist Procedures		R	R
4. Emergency Procedures		R	R
5. Airmanship (Critical)		R	R
6. Safety (Critical)		R	R
7. Aircrew Discipline(Critical)		R	R
8. CRM/Crew Coordination		R	R
9. Briefings		R	R
10. Pre-Takeoff		R	R
11. Takeoff		R	R
12. Departure/Climb	X	R	R
13. Cruise/Navigation		R	R
14. In-Flight Checks		R	R
15. ATC Communications/IFF/SIF		R	R
18. Communications Logs Reports		R	R
20. Descent		R	R
21. IFR Pattern		R	R
24. Missed Approach	X	R	R
26. Landing	9	R	R
27. Touch and Go Landing	X	R	R
29. Simulated Engine Out Pattern/landing	8, X	R	R
30. Engine Failure During Takeoff or Climbout After Takeoff	1	R	R
31. Simulated Engine Out Go-Around	8	R	R
32. Emergency Procedures-Boldface (Critical)		R	R
33. Systems Knowledge/Operation		R	R
34. After Landing		R	R
35. Postflight/Debrief		R	R
39. Combat Sent Duties	2,7		
40. Cobra Ball Duties	3,7		

41. Rivet Joint Duties	4,7		
42. Open Skies Duties	5,7		
43. Constant Phoenix Duties	6,7		
<p><b>NOTES:</b></p> <p>1. Engine Failure During Takeoff or Climbout After Takeoff may be accomplished in the ATD</p> <p>2. Required only for Combat Sent MSN certification.</p> <p>3. Required only for Cobra Ball MSN certification.</p> <p>4. Required only for Rivet Joint MSN certification.</p> <p>5. Required only for Open Skies MSN certification.</p> <p>6. Required only for Constant Phoenix MSN certification.</p> <p>7. The mission event flown on Qualification evaluations will be the one flown on the individual's primary aircraft and is not required unless certifying in a mission.</p> <p>8. AC/IP only</p> <p>9. OC/WC include Reverse Thrust Landing</p> <p>X. Refers to a general note found in the individual grading criteria</p>			

**4.9. General Grading Criteria (T-2).** For grading general areas, see [Chapter 3](#). For all evaluations, the FE will disregard minor deviations from tolerances for the purpose of clearing conflicting traffic provided the examinee initiates timely corrective action. When VMC, see and avoid responsibilities are paramount.

4.9.1. The following general criteria will be applied during all phases of flight except as noted for specific events:

**Table 4.3. General Pilot Grading Criteria.**

<b>Q</b>	Altitude	+/- 200 feet
	Airspeed	+/- 20 Kts
	MACH	+/- .03
	Heading (when assigned or as specified)	+/- 5 degrees
	Course (fix to fix)	3 NM
	TACAN Arc	+/- 2 NM
<b>Q-</b>	Altitude	+/- 300 feet

	Airspeed	+/- 25 Kts
	MACH	+/- .04
	Heading (when assigned or as specified)	+/- 10 degrees
	Course (fix to fix)	5 NM
	TACAN Arc	+/- 3 NM
<b>U</b>	All	Exceeded Q- Limits

#### 4.10. Specific Grading Criteria (T-2):

##### 4.10.1. AREA 9, Briefings

4.10.1.1. **Q.** Briefings were well organized and presented effectively in a logical sequence. Covered all pertinent items according to applicable AFIs, Flight Manuals, Flight Information Publications (FLIP), Foreign Clearance Guide (FCG), and/or other directives. Effectively used available briefing aids.

4.10.1.2. **Q-.** Briefings lacked continuity or contained unnecessary repetition. Some difficulty communicating thoughts clearly. Did not make effective use of available briefing aids. Dwelled on non-essential items.

4.10.1.3. **U.** Failed to use briefing aids. Omitted essential items. Demonstrated lack of knowledge of subject. Briefing was poorly organized and not presented in logical sequence, resulting in confusion. Presented erroneous information which would affect safe/effective mission accomplishment.

##### 4.10.2. AREA 10, Pre-Takeoff

4.10.2.1. **Q.** Performed all required procedures, calculations, and coordination prior to takeoff according to flight manuals and applicable directives. Accurately determined aircraft's readiness for flight. Computed required airspeeds within +/-3 knots, critical field length, takeoff and/or landing distances within +/- 500 feet, Engine Pressure Ratio (EPR)/N1 within +/- .02/1 %, stabilizer trim setting within +/- .5, and % Mean Aerodynamic Chord (MAC) for T/O within +/- 1%. Taxi speeds appropriate for conditions. Visually cleared area.

4.10.2.2. **Q-.** Same as above except for minor procedural deviations which would not detract from mission effectiveness. Accurately determined aircraft's readiness for flight. Computed airspeeds within +/- 5 knots, critical field length, takeoff and/or landing distances within +/- 800 feet, EPR/N1 within .03/1.5%, stabilizer setting within +/- 1.0, and % MAC for T/O within +/- 1.5%. Limited knowledge of performance data and aircraft weight and balance. Taxi speeds appropriate for conditions. Visually cleared area.

4.10.2.3. **U.** Omitted major item(s). Major deviation in procedures. Failed to accurately determine aircraft's readiness for flight. Take Off and Landing Data (TOLD) computations exceeded Q- criteria. Inadequate knowledge of performance data and aircraft weight and balance. Taxi speeds inappropriate for conditions. Did not adequately clear area.

**4.10.3. AREA 11, Takeoff**

4.10.3.1. **Q.** Smooth, positive aircraft control throughout takeoff. Performed according to flight manual procedures.

4.10.3.2. **Q-.** Minor deviations from published procedures not affecting safety of flight. Control rough or erratic. Hesitant in application of corrections.

4.10.3.3. **U.** Liftoff potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Marginal control of the aircraft. Violated flight manual procedures.

**4.10.4. AREA 12, Departure/Climb (Instrument/Visual Flight Rules (IFR/VFR))**

4.10.4.1. **Q.** Performed departure as published/directed and complied with all restrictions. Applied headings/course corrections promptly. Airspeed +/- 10 Kts.

4.10.4.2. **Q-.** Performed departure as published/directed and complied with all restrictions. Slow to apply headings/course corrections. Airspeed +/- 15 Kts.

4.10.4.3. **U.** Failed to comply with published/directed departure instructions or exceeded Q- criteria. Failed to maintain positive rate of climb. **NOTE:** Airspeed "+" tolerances do not apply unless assigned/restricted by ATC/tech data. Must not exceed placard speeds

**4.10.5. AREA 13, Cruise/Navigation**

4.10.5.1. **Q.** Leveled off smoothly. Established proper cruise airspeed promptly. Properly used appropriate navigation equipment/procedures. Ensured nav aids were properly tuned, identified, and monitored. Aware of exact position at all times. Visually cleared the area. Maintained/adjusted speeds as required to meet mission timing.

4.10.5.2. **Q-.** Level off erratic. Slow in establishing proper cruise airspeed. Minor errors in procedure/use of navigation equipment. Some deviations in tuning, identifying, and monitoring nav aids. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and maintaining/ adjusting speed to meet mission requirements. Visually cleared the area.

4.10.5.3. **U.** Level off erratic, exceeded Q- criteria. Excessive delay or failed to establish proper cruise airspeed. Major errors in procedures/use of navigation equipment to the extent that position was unreliable. Did not maintain/adjust speed to meet mission requirements. Did not visually clear the area.

**4.10.6. AREA 14, In-flight checks**

4.10.6.1. **Q.** Adhered to briefed/directed minimum fuel requirements/performed in-flight checks as required. Satisfactorily managed/monitored fuel and other systems.

4.10.6.2. **Q-.** Deviations or omissions during checks did not detract from mission accomplishment.

4.10.6.3. **U.** Did not adhere to minimum fuel requirements, perform in-flight checks, or monitor systems to the degree that an emergency condition could develop if allowed to continue uncorrected.

**4.10.7. AREA 15, ATC Communications/IFF/SIF**

4.10.7.1. **Q.** Complete knowledge of and compliance with correct procedures. Transmissions concise with proper terminology. Complied with and acknowledged all required instructions. Understood clearances and complied with controlling agency instructions. Correctly operated equipment.

4.10.7.2. **Q-.** Occasional deviations from correct procedures that required re-transmissions. Slow in initiating required actions. Transmissions contained extraneous information, were not in proper sequence, non-standard terminology. Understood clearances. Complied with controlling agency instructions with minor errors or omission not affecting mission safety. Slow to comply with controlling agency instructions. Missed several radio calls from ATC. Minor errors, deviations, or omissions in operating equipment.

4.10.7.3. **U.** Incorrect procedures or poor performance caused confusion and reduced mission effectiveness. Omitted required checks or procedures. Erroneous IFF/SIF codes used. Did not understand clearance or accepted clearance that could not be complied with. Did not read back clearance accurately (when required). Did not comply with clearance. Did not make required reports. Major errors, deviations, or omissions in operating equipment.

**4.10.8. AREA 16, Unusual Attitudes**

4.10.8.1. **Q.** Smooth positive recovery to level flight, correct recovery procedures used, or demonstrated satisfactory knowledge of correct procedures.

4.10.8.2. **Q-.** Slow to analyze attitude, or erratic in recovery to level flight correct recovery procedures followed.

4.10.8.3. **U.** Unable to determine attitude, or improper recovery procedures.

**4.10.9. AREA 17, Holding**

4.10.9.1. **Q.** Entry and holding procedures according to applicable directives. Airspeed +/- 15Kts.

4.10.9.2. **Q-.** Non-standard entry and holding procedures but remained within air space limits. Airspeed +/- 20 Kts.

4.10.9.3. **U.** Exceeded holding airspace limits or Q- criteria.

**4.10.10. AREA 19, A/R**

4.10.10.1. **Q.** Instructors and Aircraft Commanders. Continuous contact for 15 minutes for initial qualification, no more than 3 inadvertent disconnects. Continuous contact for 10 minutes with not more than 3 inadvertent disconnects for recurring evaluations (may be reduced to 5 minutes for instructor evaluations, not to include time to demonstrate envelope limits.) Used correct procedures during emergency separation. 1. Airspeed +/- 10 Kts (1/2 mile) 2. Altitude +/- 200 ft (1 mile) - 300 ft to +100 ft (1 mile to 1/2 mile). 3. (IP Only) Limits were conducted within smooth inputs and the instructor provided adequate instruction of the references during the demo. All regulatory guidance was followed and limits were accomplished safely. Copilots. Preplanned target fuel distribution and on-load to remain within aircraft weight/center of gravity (CG) limits.



Correctly configured the aircraft for refueling. Operated fuel panel during refueling to achieve desired on-load IAW planned or recalculated distribution. Provided appropriate back up to aircraft commander. Used correct procedures during emergency separation.

4.10.10.2. **Q-** Instructors and Aircraft Commanders. Continuous contact for 15 minutes for initial qualification, more than 3 inadvertent disconnects. Continuous contact for 10 minutes with more than 3 inadvertent disconnects for recurring evaluations (may be reduced to 5 minutes for instructor evaluations, not to include time to demonstrate envelope limits.) Slow to recognize and apply needed corrections to establish and maintain proper refueling position. Aircraft control not always positive and smooth, but adequate. Accomplished procedures required by the flight manual and local directives with minor errors, deviations, and/or omissions. Minor errors, deviations, and/or omissions in emergency separation procedures. 1. Airspeed +/- 15 Kts (1/2 mile) 2. Altitude +/- 300 ft (1 mile) -300 ft to +200 ft (1 mile to 1/2 mile). 3. (IP Only) Limits were conducted with smooth inputs with little or no instruction given. All regulatory guidance was followed and limits were accomplished safely. Copilots. Preplanned target fuel distribution and on-load to remain within aircraft weight/CG limits. Correctly configured the aircraft for refueling. Operated fuel panel during refueling to achieve desired on-load IAW planned or recalculated distribution. Provided minimal back up to aircraft commander. Minor errors, deviations or omissions in emergency separation procedures.

4.10.10.3. **U.** Instructors and Aircraft Commanders. Erratic or dangerous in the refueling position. Errors/deviations/omissions that affected flight safety and/or the successful completion of air refueling. Exceeded the Q- criteria. Major errors, deviations, or omissions in aerial refueling procedures including limits (IP only) and practice separations. Copilots. Major errors, deviations, and/or omissions in configuring the aircraft for refueling. Did not calculate target fuel distribution and CG or exceeded Q- criteria. Exceeded or attempted to exceed operating/CG limits while operating fuel panel during refueling. Did not back up, or caused distraction of, the aircraft commander. Major errors, deviations, and/or omissions in procedures during emergency separation.

**NOTES:** 1. Copilots will be checked on performance of duties during rendezvous and refueling operations, including fuel panel, checklist, center of gravity, and breakaway procedures. Copilot air refueling checks may be completed in the ATD or an aircraft on the ground if unable to complete during flight evaluation. 2. Air Refueling track time should be scheduled to allow a minimum of 30 minutes contact time. Unit Stan/Eval may establish a maximum amount of time from initial pre-contact to achieve required contact time. 3. For instructor pilots performing an Air Refueling limits demonstration, inadvertent disconnects are permissible during demonstration and therefore will not be counted against the examinee.

#### 4.10.11. **AREA 20, Descent**

4.10.11.1. **Q.** Performed descent as directed. Complied with all restrictions. Visually cleared the area. Complied with Flight Manual procedures and local directives. Computed required airspeeds within +/-3 knots, landing distances within +/- 500 feet, EPR/N1 within +/- .02/1 %. Airspeed +/- 10 Kts (if applicable).

4.10.11.2. **Q-**. Performed descent as directed with minor deviations. Visually cleared the area adequately. Slow to accomplish Flight Manual procedures and complied with local directives. Computed required air speeds within +/-5 knots, landing distances within +/- 800 feet, EPR/ N1 within +/- .03/1.5 %. Limited knowledge of performance data. Airspeed +/- 15 Kts (if applicable).

4.10.11.3. **U**. Performed descent with major deviations. Did not accomplish required checks. Failed to visually clear the area adequately. Major errors, deviations or omissions in landing data. Exceeded Q- criteria. Inadequate knowledge of performance data.

**4.10.12. AREA 21, IFR Pattern (prior to Final Approach Fix (FAF))**

4.10.12.1. **Q**. Procedures required by the flight manual and applicable directives were accomplished. Followed controller's instructions and complied with all restrictions. Made smooth and timely corrections. Airspeed +20 (Did not exceed Flap Placard)/-5 Kts.

4.10.12.2. **Q-**. Procedures required by the flight manual and applicable directives were accomplished with omissions or deviations. Slow or hesitant in following controller's instructions. Over controlled slightly or occasionally and/or slow in making corrections. Airspeed +30 (Did not exceed Flap Placard)/-5 Kts.

4.10.12.3. **U**. Made major deviations or omissions in procedures required by the flight manual or directives. Failed to comply with controller instructions. Exceeded Q- criteria.

**4.10.13. AREA 22, Precision Approach (Glide Path (GP)-Decision Altitude (DA))**

4.10.13.1. **Q**. Performed procedures correctly/as published. Smooth and timely corrections. Initiated appropriate action or prompt response at DA. Position would have permitted a safe landing.

4.10.13.1.1. Glideslope-Did not exceed slightly above/slightly below or one dot.

4.10.13.1.2. Airspeed +10/-5 Kts.

4.10.13.1.3. Heading/Course +/-5 degrees of controller's instructions/within 1 dot.

4.10.13.2. **Q-**. Performed procedures with minor deviations. Slow to respond/make corrections. Initiated appropriate action at decision altitude +/-50 ft. Position would have permitted a safe landing.

4.10.13.2.1. Glideslope-Within PAR safety limits or 2 dots above/1 dot below.

4.10.13.2.2. Airspeed +15/-5 Kts.

4.10.13.2.3. Heading/Course +/-10 degrees of controller's instructions/within 2 dots.

4.10.13.3. **U**. Performed procedures with major deviations. Erratic corrections. Did not respond to controller's instructions and/or exceeded Q- criteria. Did not comply with decision altitude. Position would not have permitted a safe landing.

**4.10.14. AREA 23, Non-Precision Approach (FAF-Missed Approach Point (MAP))**

4.10.14.1. **Q.** Performed procedures as published/directed. Made smooth and timely corrections. Arrived at Minimum Descent Altitude (MDA) prior to or at Visual Descent Point (VDP). Position would have permitted safe landing.

4.10.14.1.1. Airspeed +10/-5 Kts.

4.10.14.1.2. Altitude +100/-0 ft (after reaching MDA and prior to MAP).

4.10.14.1.3. Heading/Course +/-5 degrees or within one dot.

4.10.14.1.4. Timing computed to 10% of actual timing (when applicable).

4.10.14.2. **Q-.** Performed procedures with minor deviations. Slow to make corrections. Arrived at MDA prior to/at missed approach point. Position would have allowed safe landing.

4.10.14.2.1. Airspeed +15/-5 Kts.

4.10.14.2.2. Altitude +100/-50 ft (after reaching MDA and prior to MAP)

4.10.14.2.3. Heading/Course +/- 10 degrees or within two dots.

4.10.14.2.4. Timing computed to 20% of actual timing (when applicable).

4.10.14.3. **U.** Performed procedures with major deviations. Erratic corrections. Exceeded Q- criteria. Maintained steady state flight below MDA even though the -50 foot momentary deviation limit was not exceeded. Position would not have permitted a safe landing.

#### 4.10.15. **AREA 24, Missed Approach**

4.10.15.1. **Q.** Executed missed approach as published or directed. Completed all procedures according to applicable flight manual and directives.

4.10.15.1.1. Airspeed +/- 5 Kts.

4.10.15.1.2. Heading +/- 5 degrees.

4.10.15.2. **Q-.** Executed missed approach with minor deviations. Slow to comply with published procedures, controller's instructions, flight manual procedures, or directives.

4.10.15.2.1. Airspeed +/- 10 Kts.

4.10.15.2.2. Heading +/- 10 degrees.

4.10.15.3. **U.** Executed missed approach with major deviations. Failed to comply with published procedure, controller's instructions, flight manual procedures, or directives. Exceeded Q- criteria. **NOTES:** 1. Missed Approach must be initiated from an Instrument Approach. 2. Airspeed "+" tolerances do not apply unless assigned/restricted by ATC/tech data. Must not exceed placard speeds.

#### 4.10.16. **AREA 25, VFR Traffic Pattern**

4.10.16.1. **Q.** Performed traffic patterns according to the flight manual, operational procedures, and directives. Aircraft control was positive and smooth. Effectively cleared ahead of flight-path. Airspeed + (Did not exceed Flap Placard)/-5 Kts.

4.10.16.2. **Q-.** Performed traffic patterns with minor deviations to procedures outlined in the flight manual, operational procedures, and directives. Aircraft control was not consistently positive and smooth, but safe. Adequately cleared area of intended flight. Airspeed + (Did not exceed Flap Placard)/-5 Kts.

4.10.16.3. **U.** Traffic patterns not performed according to procedures outlined in the flight manual, operational procedures, and directives. Erratic aircraft control. Did not clear area of intended flight. Exceeded Q- criteria. **NOTE:** May be graded using a rectangular pattern or a circling maneuver.

#### 4.10.17. **AREA 26, Landing**

4.10.17.1. **Q.** Performed landings according to procedures outlined in the flight manual, operational procedures, and directives. Correctly used thrust reversers, as applicable.

4.10.17.1.1. Threshold Speed: +10/-5 Kts.

4.10.17.1.2. Touchdown Point: +/- 1000 feet as compared to computed flare distance and within stopping distance for runway available.

4.10.17.2. **Q-.** Landings performed according to procedures outlined in the flight manual, but outside the tolerances listed in Q criteria. Touchdown within stopping distance for runway available.

4.10.17.3. **U.** Landings not performed according to procedures outlined in the flight manual, operational procedures, and directives. Exceeded Q- criteria.

#### 4.10.18. **AREA 27, Touch and Go Landings**

4.10.18.1. **Q.** Complied with flight manual procedures, operational restrictions, and local directives. Ensured adequate runway length to permit a safe stop. Corrected to centerline prior to rotation. Smooth, positive aircraft control throughout takeoff phase.

4.10.18.2. **Q-.** Minor errors/deviations/omissions in flight manual procedures, operational restrictions, or local directives. Ensured adequate runway length to permit a safe stop. Slow to correct to centerline. Control rough, erratic, or hesitant during takeoff phase.

4.10.18.3. **U.** Major errors/deviations/omissions in flight manual procedures, operational restrictions, or local directives. Failed to ensure adequate runway length. Did not correct to centerline. Liftoff potentially dangerous. Over controlled aircraft. **NOTE:** Instructors must perform a touch and go as both the pilot flying and pilot not flying to complete this area.

#### 4.10.19. **AREA 28, Go Around**

4.10.19.1. **Q.** Aircraft control was smooth and positive. Promptly established appropriate go around pitch and power settings. Performed procedures IAW the flight manual. Complied with pattern/maneuver and flap retraction speed limitations.

4.10.19.2. **Q-.** Slow to establish appropriate go around pitch and power settings. Minor errors/ deviations/omissions in flight manual procedures. Complied with pattern/maneuver and flap retraction speed limitations.

4.10.19.3. **U.** Rough or erratic aircraft control. Pitch and power settings were inappropriate. Major errors/deviations/omissions in flight manual procedures. Failed to comply with pattern/ maneuver and/or flap retraction speed limitations. **NOTES:** 1. May be flown from any type of approach, IFR or VFR. FE may direct a go around at any point in an approach or landing to evaluate go around procedures. 2. May be graded during a missed approach.

**4.10.20. AREA 29, Simulated Engine-Out Pattern/Landing**

4.10.20.1. **Q.** Performed pre-landing checks, traffic pattern, approach and landing in accordance with procedures outlined in the flight manual and other directives. Aircraft control was positive and smooth.

4.10.20.1.1. Airspeed on Final +15/-5 Kts.

4.10.20.1.2. Airspeed Pattern + (Did not exceed Flap Placard)/ -5 Kts.

4.10.20.2. **Q-.** Minor procedural errors during pre-landing checks, traffic pattern, approach/ landing which did not affect safety. Landed in slight crab.

4.10.20.2.1. Airspeed on Final +20/-5 Kts.

4.10.20.2.2. Airspeed Pattern + (Did not exceed Flap Placard)/-10 Kts.

4.10.20.3. **U.** Failed to recognize and apply corrections to avoid over/undershoots, did not comply with procedures outlined in the flight manual/other directives. Exceeded Q- criteria.

**4.10.21. AREA 30, Engine Failure During Takeoff or Climbout After Takeoff**

4.10.21.1. **Q.** Used positive application of proper control inputs. 10 Kts or less of airspeed lost. Called for and accomplished checklist IAW Tech Order.

4.10.21.2. **Q-.** Slow to apply proper inputs. Lost more than 10 but not greater than 15 Kts of airspeed. Slow to call for and accomplish required checklist.

4.10.21.3. **U.** Failed to properly control aircraft. Lost more than 15 Kts of airspeed. Failed to call for or accomplish required checklist.

**4.10.22. AREA 31, Simulated Engine-Out/Go Around**

4.10.22.1. **Q.** Initiated and performed go-around promptly in accordance with flight manual and applicable directives. Acquired/maintained a positive climb with airspeed no less than -5 Kts.

4.10.22.2. **Q-.** Slow or hesitant to initiate go-around. Minor procedural deviations which did not affect safety. Acquired/maintained a positive climb. Airspeed not less than -10 Kts.

4.10.22.3. **U.** Did not initiate go-around when appropriate or directed. Techniques unsafe or applied incorrect procedures. Exceeded Q- criteria.

**4.10.23. AREA 32, Emergency Procedures - Boldface (Critical)**

4.10.23.1. **Q.** Correct responses. Maintained aircraft control. Coordinated proper actions.

4.10.23.2. **U.** Incorrect sequence, unsat response, or unsat performance of corrective action.

**4.10.24. AREA 33, Systems Knowledge Operation**

4.10.24.1. **Q.** Satisfactory knowledge of systems ensuring effective operation within prescribed limits and diagnosis of problems. Explained proper corrective action for each type of malfunction. Effectively utilized publications and/or available aids.

4.10.24.2. **Q-.** Incomplete knowledge of system operating limits. Slow to analyze problems or take proper corrective action. Did not effectively use publications and/or available aids.

4.10.24.3. **U.** Unsatisfactory knowledge of systems. Unable to analyze problems or take corrective action. Did not use publications and/or available aids.

**4.10.25. AREA 34, After Landing**

4.10.25.1. **Q.** Aircraft taxi procedures accomplished in accordance with the flight manual and applicable directives. Taxi speeds appropriate for conditions. Visually cleared area. Safely followed marshaller's instructions.

4.10.25.2. **Q-.** Same as Q except minor errors, deviations or omissions were noted in aircraft taxi procedures. Taxi speeds appropriate for conditions. Visually cleared area. Some confusion over marshaller's instructions.

4.10.25.3. **U.** Major errors, deviations or omissions were made in aircraft taxi procedures. Taxi speeds inappropriate for conditions. Failed to clear. Disregarded marshaller's instructions, or allowed marshaler to direct an unsafe situation.

**4.10.26. Area 39, COMBAT SENT Duties**

4.10.26.1. **Q.** Satisfactorily complied with all appropriate mission procedures. Monitored mission and supervised flight with no loss of collection.

4.10.26.2. **Q-.** Accomplished mission with errors or deviations from procedures. Collection was degraded but not lost.

4.10.26.3. **U.** Errors/deviations/omissions that affected flight safety and/or the successful completion of the mission. Exceeded the Q- criteria. Lost more than 50 percent of collection requirements.

**4.10.27. Area 40, COBRA BALL Duties**

4.10.27.1. **Q.** Satisfactorily complied with all appropriate mission procedures. Monitored mission and supervised flight with no loss of collection.

4.10.27.2. **Q-.** Accomplished mission with errors or deviations from procedures. Collection was degraded but not lost.

4.10.27.3. **U.** Errors/deviations/omissions that affected flight safety and/or the successful completion of the mission. Exceeded the Q- criteria. Lost more than 50 percent of collection requirements.

**4.10.28. Area 41, RIVET JOINT Duties**

4.10.28.1. **Q.** Satisfactorily complied with all appropriate mission procedures. Monitored mission and supervised flight with no loss of collection.

4.10.28.2. **Q-.** Accomplished mission with errors or deviations from procedures. Collection was degraded but not lost.

4.10.28.3. **U.** Errors/deviations/omissions that affected flight safety and/or the successful completion of the mission. Exceeded the Q- criteria. Lost more than 50 percent of collection requirements.

**4.10.29. Area 42, OPEN SKIES Duties**

4.10.29.1. **Q.** Satisfactorily complied with all appropriate mission procedures. Monitored mission and supervised flight with no loss of collection.

4.10.29.2. **Q-.** Accomplished mission with errors or deviations from procedures. Collection was degraded but not lost.

4.10.29.3. **U.** Errors/deviations/omissions that affected flight safety and/or the successful completion of the mission. Exceeded the Q- criteria. Lost more than 50 percent of collection requirements.

**4.10.30. Area 43, CONSTANT PHOENIX Duties**

4.10.30.1. **Q.** Satisfactorily complied with all appropriate mission procedures. Monitored mission and supervised flight with no loss of collection.

4.10.30.2. **Q-.** Accomplished mission with errors or deviations from procedures. Collection was degraded but not lost.

4.10.30.3. **U.** Errors/deviations/omissions that affected flight safety and/or the successful completion of the mission. Exceeded the Q- criteria. Lost more than 50 percent of collection requirements.

## Chapter 5

### NAVIGATOR EVALUATIONS

**5.1. General.** Grading criteria contained herein cannot cover every situation. Written parameters must be tempered with sortie objectives, evaluator judgment, and task accomplishment in the determination of overall aircrew performance. Specific requirements for each evaluation are as follows:

**5.2. Qualification Evaluations (T-2):** Qualification evaluation ensures that individuals are capable of using the equipment and skills necessary to navigate the aircraft.

5.2.1. Ground Requisites: See **Table 2.1**

5.2.2. Flight phase: All areas in **Table 5.1** under "QUAL" (Qualification) will be evaluated. Any air refueling or area work not completed on the scheduled sortie may be completed in the ATD with SQ/CC approval.

**5.3. Multiple Certifications (T-2).** When authorized by the OG/CC IAW 11-2RC-135V1, to establish or maintain certifications in more than one -135 model, use the following guidance. To add an additional -135 model (RC/OC/WC), a separate certification for that model will be accomplished. Some model transitions may require a difference evaluation covered below. To initially certify in more than one -135 model, or for recurring evaluations of navigators certified in more than one -135 model, complete flight evaluation IAW AFI 11-202V2. Ensure Qualification Examination(s) and Emergency Procedures Examination(s) cover all applicable models and mission requirements.

5.3.1. For examinees flying in multiple models (e.g., 338th CTS instructors) the collection maneuver will be the one flown by his/her primary aircraft.

**5.4. Difference Evaluations (T-2).** Difference Evaluations allow an individual to qualify in the same crew position in a similar MDS or in a new or different system within the same MDS. Difference evaluations do not update expiration dates.

5.4.1. Complete difference training and certification/qualification IAW AFI 11-2RC-135V1.

5.4.2. Requisites: Closed book examination.

5.4.3. Flight phase: The requirement for a flight evaluation is determined by OG/CC IAW AFI 11-2RC-135V1.

**5.5. Instructor Evaluations (T-2):**

5.5.1. Initial Instructor. The initial instructor evaluation should be a separate evaluation. If combined with a recurring qualification evaluation, the examinee must be in the seat for the primary events (e.g. air refueling, recon orbit procedures, etc). Landing gear emergency extension will be demonstrated by the examinee while verbally explaining the procedure. The examinee must demonstrate proficiency by instructing a student navigator (ideal) or a qualified navigator, in all areas required for a qualification evaluation. The evaluator may require the examinee to demonstrate and/or present verbal instruction of air refueling, emergency equipment, aircraft systems, navigation procedures, and techniques. These



demonstrations will be briefed to the examinee and will be accomplished inflight at an appropriate time so as not to interfere with the examinee's crew duties or pacing.

5.5.2. Recurring Instructor. For recurring instructor evaluations, all applicable areas required in **Table 5.1** will be evaluated to include those listed under "INSTR" (instructor). The evaluator may require the examinee to demonstrate and/or present verbal instruction of air refueling, emergency equipment, aircraft systems, navigation procedures, and techniques. These demonstrations will be briefed to the examinee and will be accomplished inflight at an appropriate time so as not to interfere with the examinee's crew duties or pacing.

5.5.3. Instructor Requalification Evaluations. Will be IAW AFI 11-2RC-135V1 and AFI 11-202V2. Follow guidance for Recurring Instructor Evaluations.

**5.6. Emergency Procedures Evaluations (EPE) (T-2).** Use a verbal EPE to satisfy the requirements for grading Area 4, "Emergency Procedures."

**5.7. Navigator Evaluation Requirements (T-2):**

5.7.1. The table below lists areas for navigator qualification and instructor evaluations.

**Table 5.1. Navigator Evaluation Requirements.**

AREA/TITLE	NOTES	QUAL	INSTR
1. Equipment/Publications		R	
2. Mission Planning		R	
3. Checklist Procedures		R	
4. Emergency Procedures		R	
5. Airmanship (Critical)		R	
6. Safety (Critical)		R	
7. Aircrew Discipline (Critical)		R	
8. CRM/Crew Coordination		R	
9. Flight Plan/Charts	X	R	
10. General Navigation/and Inflight Information	X	R	
11. Pacing		R	
12. Communication Device Loading Procedures	1, X	R	
13. Equipment Operation	X	R	
14. Air Refueling	9,X	R	
15. Landing Gear Alternate Extension	2,9	R	
16. Descent/Approach/Landing		R	
17. Postflight/Debrief		R	
18. Communication, Logs and Reports	9	R	

19. Instructional Ability	8		R
20. Briefings/Critique	8		R
21. Demonstration and Performance	8		R
22. Data Track	3, 4		
23. Reconnaissance Orbit Area	3, 5, X		
24. OPEN SKIES Operations	3,6		
25. OPEN SKIES Navigation Leg Communications	3,6, X		
26. CONSTANT PHOENIX Operations	3,7		
<p><b>NOTES:</b></p> <p>1. N/A OC-135</p> <p>2. Required for INIT QUAL and INIT INSTR evaluations only.</p> <p>3. The collection maneuver flown on Qualification evaluations will be the one flown on the individual's primary aircraft.</p> <p>4. Required only for RC-135S/U MSN certifications.</p> <p>5. Required only for RC-135V/W MSN certifications.</p> <p>6. Required only for OPEN SKIES MSN certifications.</p> <p>7. Required only for CONSTANT PHOENIX MSN certifications.</p> <p>8. Grading criteria IAW paragraph 3.3. of this instruction.</p> <p>9. Not required for SSOs.</p> <p>X. Refers to a general note found in the individual grading criteria</p>			

**5.8. General Grading Criteria:** For grading general areas, see [Chapter 3](#).

**5.9. Specific Grading Criteria (T-2):**

**5.9.1. AREA 9, Flight Plan/Charts.**

5.9.1.1. **Q.** Selected current navigation charts of proper scale and type for the mission. Charts and flight plan were prepared in accordance with the flight manual and governing directives. Chart was annotated with required information. Route was plotted with errors not to exceed 5 NM. Flight plan was complete with no more than minor errors/omissions; no error exceeded 5 degrees of heading and/or 2 minutes of time.

5.9.1.2. **Q-.** Route plotting errors did not exceed 10 NM. No more than four errors exceeded Q tolerances and no error exceeded 10 degrees of heading and/or 4 minutes of time.

5.9.1.3. **U.** Flight plan or chart was not completed, or contained major errors or omissions which would affect mission accomplishment. Selected improper or obsolete charts. Exceeded Q- criteria. **NOTES** 1. Computer-generated products are authorized for all mission planning. When used, the navigator is responsible for the data's accuracy. 2. Errors that occur as a result of a previous error will not be considered when applying the grading criteria.

#### 5.9.2. **AREA 10, General Navigation and Inflight Information.**

5.9.2.1. **Q.** Maintained course, any deviations were momentary and did not exceed 5 NM (2 NM or as specified for operations below Flight Level (FL) 180) from ARTCC-cleared course. System crosschecks using all available resources were accomplished during the flight. Significant errors were resolved prior to the next crosscheck.

5.9.2.2. **Q-.** Did not allow the airplane to deviate more than 10 NM (4 NM or as specified for operations below FL 180) from the course. System crosschecks using all available resources were accomplished during the flight.

5.9.2.3. **U.** Exceeded Q- tolerances. **NOTE:** The navigator is always responsible for position awareness. Navigator's primary responsibility for navigation commences at level off and ceases when the pilot or air traffic controller assumes responsibility for navigation to the terminal facility.

#### 5.9.3. **AREA 11, Pacing.**

5.9.3.1. **Q.** Held an even workflow achieving maximum use of available time. Stayed ahead of flight progress. Ensured accurate and timely position reports, alter headings, and/or control times. Expeditiously dealt with deviations from original flight plan.

5.9.3.2. **Q-.** Pacing was adequate but occasionally worked behind aircraft. Position reports not over 5 minutes late and turning points not over flown by more than two minutes.

5.9.3.3. **U.** Overall pacing was unsatisfactory. Worked behind aircraft throughout most of flight. Position reports were late by more than 5 minutes and turn points were over flown by more than two minutes.

#### 5.9.4. **AREA 12, Communication Device Loading Procedures.**

5.9.4.1. **Q.** Examinee will load Mode 4 Codes and load secure voice in the UHF or VHF radio IAW prescribed procedures and within limitations.

5.9.4.2. **Q-.** Codes required for the sortie were improperly set/loaded due to minor deviations and equipment was not operated completely IAW prescribed procedures but equipment limitations were not exceeded and sortie success was not jeopardized.

5.9.4.3. **U.** Examinee was unable to set/load required codes, equipment was not operated IAW prescribed procedures, equipment limitations would have been exceeded without evaluator intervention and sortie success was affected. **NOTE:** Examinee will not be held responsible for equipment malfunctions as long as procedures were correct. If codes cannot be loaded due to equipment malfunction or timing, an oral evaluation of these procedures will fulfill the requirement in this area.

#### 5.9.5. **AREA 13, Equipment Operation.**

5.9.5.1. **Q.** Navigation equipment was operated IAW prescribed procedures with no more than minor deviations or omissions that could not cause damage to equipment or significantly degrade system performance. Equipment malfunctions were correctly analyzed and corrected when possible for satisfactory equipment capability. The coordinates in the navigation system were never more than 5 NM in error provided there were no equipment malfunctions.

5.9.5.2. **Q-.** Navigation equipment was not operated IAW prescribed procedures. Equipment malfunctions were incorrectly analyzed or corrective actions were incomplete or incorrect. Variations or omissions in prescribed procedures, erroneous data insertion, or faulty techniques caused a significant degradation of equipment performance. In any case actions could not have damaged equipment or jeopardized mission objectives. The coordinates in the navigation system were never more than 10 NM in error provided there were no equipment malfunctions.

5.9.5.3. **U.** Exceeded Q- criteria. **NOTE:** The extent of in-flight corrective action required of the navigator to alleviate a search radar malfunction will be determined by the mission requirements.

#### 5.9.6. **AREA 14, Air Refueling.**

5.9.6.1. **Q.** Rendezvous and air refueling procedures were IAW prescribed procedures and all checklists were accomplished with no more than minor discrepancies. Met planned air refueling timing +/- 1.5 minutes using all reasonable effort. If unable to make the scheduled air refueling rendezvous time after using speed control and route adjustment techniques, coordinated a revised RVCT. No training was lost by the tanker or receiver which could be attributed to the navigator's error. Directed closure to within 1 NM of tanker.

5.9.6.2. **Q-.** Displayed lack of knowledge and familiarity with the checklists and/or rendezvous and air refueling procedures, however, knowledge was sufficient to accomplish rendezvous and air refueling with minimal loss of training time/activity. Ineffective timing control resulted in unnecessarily delaying the rendezvous. Poor planning or inattention on the navigator's part caused the examinee to overlook timing control until it was too late to make the rendezvous using speed control and route adjustment techniques (greater than 1.5 minutes but less than 2.5 minutes of briefed time of the RVCT) but a revised RVCT was then coordinated prior to the IP. Receiver navigator directed closure to within 1 NM of tanker. No significant amount of training was lost by the tanker or receiver.

5.9.6.3. **U.** Displayed lack of knowledge and familiarity with the checklists and/or rendezvous and air refueling procedures to the extent that the rendezvous or air refueling was jeopardized or precluded or significant training time/activity was lost. Poor planning or inattention on the navigator's part caused the examinee to overlook timing control until it was too late to make the rendezvous using speed control and route adjustment techniques, and no revision was made to the RVCT. Timing exceeded Q- tolerances. Significant training was lost by tanker or receiver. Receiver navigator was unable to direct closure to within 1 NM of tanker. Rendezvous radio calls were incorrect, extremely non-standard or late to a degree that caused confusion and compromised safety of flight. **NOTES:** 1. Navigators must demonstrate proficiency in ATP-56(B)

and established flight manual procedures. 2. Air refueling includes rendezvous (Point Parallel/RV Delta or Enroute/RV Golf), orbit, interplane communications, breakaway, and post air refueling. 3. Examinee will not be penalized for radio malfunctions or limitations (e.g., unable to contact a command post) that prevent revising the rendezvous time or accomplishing required radio calls on time.

#### **5.9.7. AREA 15, Landing Gear Alternate Extension.**

5.9.7.1. **Q.** Landing gear alternate extension procedures were performed with no deviations or with minor deviations or omissions that did not affect the safe outcome of the procedure and crew coordination was satisfactory.

5.9.7.2. **Q-.** Landing gear alternate extension procedures were performed with several minor deviations or omissions that could have affected the outcome of the procedure. Crew coordination was satisfactory with minor errors.

5.9.7.3. **U.** Landing gear alternate extension procedures were performed with major deviations or omissions that affected the safe outcome of the procedure. Crew coordination was unsatisfactory and/or safety was compromised. **NOTE:** Emergency extension of landing gear will be accomplished by navigators on initial qualification and initial instructor evaluations only. Need not be re-accomplished when qualifying in other series aircraft equipped with identical emergency extension systems.

#### **5.9.8. AREA 16, Descent/Approach/Landing.**

5.9.8.1. **Q.** Monitored aircraft position and approach instructions. Configured FMS for appropriate approaches and verified correct landing data was loaded (N/A OC/WC-135). Furnished the pilot with headings, ETAs, and other information when required. Thoroughly understood approach and/or missed approach instructions/procedures. Monitored appropriate FLIP terminal approach plate. Made all required calls, and ensured terrain clearance.

5.9.8.2. **Q-.** Monitored aircraft position but did not monitor or understand approach and/or missed approach instructions/procedures. Slow in providing headings, ETAs, and other information when required.

5.9.8.3. **U.** Failed to monitor aircraft position. Did not ensure terrain clearance during approach. Incorrectly loaded FMS landing data and approach was delayed, or wrong approach was loaded into FMS.

#### **5.9.9. AREA 22, Data Track (RC-135S/U).**

5.9.9.1. **Q.** Present position counters were no more than 5 NM in error throughout data run provided there were no significant equipment malfunctions. Roll out at top of track (TOT) was made good within 1 minute of planned/announced timing and collection was not degraded by the aircraft position. The navigator forwarded the maximum time-on-track and current true heading to the TC within 2 minutes after initial rollout and all subsequent rollouts during the data run. The aircraft heading was corrected to within 2 degrees of desired data run heading not later than 3 minutes after rollout on the data track.

5.9.9.2. **Q-.** Present position counters were no more than 10 NM in error throughout data run provided there were no significant equipment malfunctions. Roll out at TOT

was made good within 90 seconds of planned/announced timing and collection was degraded but still accomplished. The navigator forwarded the maximum time-on-track and current true heading to the TC within 3 minutes after initial rollout and all subsequent rollouts during the data run. The aircraft heading was corrected to within 3 degrees of desired data run heading not later than 5 minutes after rollout on the data track.

5.9.9.3. **U.** Exceeded Q- criteria. **NOTES:** 1. RC-135S navigators must demonstrate data track procedures by planning and flying a data track leg. Data track is that portion of navigation that starts at rollout on data run until return to orbit or roll out on heading when departing the data track. Any enroute navigation exercises or procedures will terminate at roll in point (RIP) at TOT and may resume within 5 minutes of the end of data track or receipt of the RTB message. 2. During orbit and data track, aircraft position will be monitored at all times. Recording of aircraft positions on data run paperwork fulfills the requirements of aircraft position/crosscheck. 3. In-flight information will be recorded IAW mission directives/AFI 11-2RC-135 Volume 3. 4. Evaluatees will be able to identify and discuss differences between COBRA BALL and COMBAT SENT navigation procedures.

#### 5.9.10. **AREA 23, Reconnaissance Orbit Area Procedures (RC-135V/W).**

5.9.10.1. **Q.** Orbit area procedures were in accordance with prescribed directives and were accomplished with no more than minor discrepancies. Every reasonable effort was made to make exit timing within +/- 1.5 minutes of briefed control time with no degrade to collection activity. Repositioned aircraft as required to cover tactical mission requirements and no collection was lost due to aircraft positioning.

5.9.10.2. **Q-.** Displayed a lack of knowledge and familiarity with orbit area procedures. However, knowledge was sufficient to ensure orbit area procedures were accomplished with minimal loss of training or collection activity. Exit timing was greater than 1.5 minutes but less than 2.5 minutes of briefed time.

5.9.10.3. **U.** Displayed a lack of knowledge and familiarity with orbit area procedures to the extent that the orbit area procedures were jeopardized or training time/collection activity was lost. Failed to position the aircraft over the exit point within 2.5 minutes of the briefed control time. If aircraft was covering friendly assets, collection capability was degraded due to aircraft positioning **NOTE:** If the reconnaissance orbit area procedures must be terminated or abbreviated for weather, equipment malfunction, emergency, or mission profile change, the evaluator may give credit for this event provided all "Q" requirements are met. Grade orbit area procedures IAW AFI 11-2RC-135V1.

#### 5.9.11. **AREA 24, OPEN SKIES Operations**

5.9.11.1. **Q.** Maintained course, any deviations were momentary and did not affect mission accomplishment. System crosschecks using all available resources were accomplished every 30 minutes to verify the accuracy of navigation equipment, and significant errors were resolved prior to the next crosscheck. A minimum of two Open Skies turns and three sensor legs were flown with no adverse effect on sensor operations.

5.9.11.2. **Q-.** Deviations from course were minor and would have had a minimal effect on mission accomplishment. System crosschecks using all available resources were

accomplished during the flight but exceeded 30 minutes, or significant errors were not addressed in a timely manner. Improper execution of Open Skies turns would have led to a minor loss of sensor operations.

5.9.11.3. **U.** Exceeded Q- criteria.

**5.9.12. AREA 25, OPEN SKIES Navigation Leg Communications.**

5.9.12.1. **Q.** Made 90 percent or more of the required sensor call actions. Timely and effective communication with the pilots and mission crew did not prevent successful data collection.

5.9.12.2. **Q-.** Made 80 percent or more of the required sensor call actions. Deviations or omissions in communications resulted in significant degradation of data collection.

5.9.12.3. **U.** Exceeded Q- criteria. **NOTES:** 1. The required sensor action calls are: one minute to sensor on; 30 seconds to sensor on; countdown to sensor on; 30 seconds to sensor off; countdown to sensor off. 2. Sensor calls will not be considered missed if they conflict with other call/actions that are critical to flight safety and/or data collection.

**5.9.13. AREA 26, CONSTANT PHOENIX Operations.**

5.9.13.1. **Q.** Adequately monitored position and ensured placement of aircraft to optimize collection IAW WC-135 orbit and re-intercept procedures. System crosschecks using all available resources were accomplished every 30 minutes to verify the accuracy of navigation equipment, and significant errors were resolved prior to the next crosscheck. Kept aircraft within bounds of operating area at all times.

5.9.13.2. **Q-.** Deviations from course were minor and would have had a minimal effect on mission accomplishment. Displayed a lack of familiarity with WC-135 orbit and re-intercept procedures. System crosschecks using all available resources were accomplished during the flight but exceeded 30 minutes, or significant errors were not addressed in a timely manner. Aircraft strayed outside the operating area boundary.

5.9.13.3. **U.** Exceeded Q- criteria.

## Chapter 6

### ELECTRONIC WARFARE OFFICER (EWO) EVALUATIONS

**6.1. General.** Grading criteria contained herein cannot cover every situation. Written parameters must be tempered with sortie objectives, evaluator judgment, and task accomplishment in the determination of overall aircrew performance. Specific requirements for each evaluation are as follows:

**6.2. Qualification Evaluations (T-2):**

6.2.1. Ground Requisites: See [Table 2.1](#)

6.2.2. Flight Phase: All areas required in [Table 6.1](#) under "QUAL" will be evaluated.

6.2.3. Dual Qualification Evaluations. When authorized IAW AFIs 11-202V1 and 11-2RC-135V1, to establish or maintain qualification in two different EWO positions on the same MDS, use the following guidance:

6.2.3.1. Dual Qualification requires a separate evaluation for each position.

6.2.3.2. Both evaluations may be combined on one sortie provided all required grading areas are evaluated for both positions.

6.2.3.3. Requisites are normally combined.

**6.3. Difference Qualifications (T-2).** Difference Qualifications allow an individual to qualify in a different tactic/system within the same MDS. Complete difference training and certification IAW AFI 11-2RC-135V1. Training in a different system does not qualify a crewmember in a different crew position. Difference Qualifications do not update expiration dates.

6.3.1. Ground Requisites. Qualification Examination (closed book).

6.3.2. Flight Phase. The requirement for a flight evaluation is determined by OG/CC IAW AFI 11-2RC-135V1.

**6.4. Instructor Evaluations (T-2).** All areas required in [Table 6.1](#) under "INSTR" will be evaluated. General grading criteria is located in [Chapter 3](#). Units will complete initial instructor checks during flight.

**6.5. EPE (T-2).** Use the Emergency Procedures criteria to evaluate EPEs. The EPE satisfies the in-flight requirements for Area 4, Emergency Procedures, if no actual emergency procedure is experienced in-flight.

**6.6. EWO Evaluation Requirements (T-2):**

6.6.1. The table below lists areas for EWO qualification and instructor evaluations.

**Table 6.1. EWO Evaluation Requirements.**

AREA/TITLE	NOTES	QUAL	INSTR
1. Equipment/Publications		R	
2. Mission Planning		R	



3. Checklist Procedures		R	
4. Emergency Procedures		R	
5. Airmanship (Critical)		R	
6. Safety (Critical)		R	
7. Aircrew Discipline (Critical)		R	
8. CRM/Crew Coordination		R	
9. Equipment/Systems Knowledge	2,X	R	
10. Equipment/Systems Operation	2,X	R	
11. Postflight/Debrief		R	
12. Tactical Planning	2	R	
13. Employment	2	R	
14. Data Collection Recording	2,X	R	
15. Communications, Logs and Reports	2	R	
16. Collection Debrief	2	R	
17. Instructional Ability	1		R
18. Briefings/Critique	1		R
19. Demonstration and Performance	1		R
<b>NOTES:</b> 1. Grading criteria IAW paragraph <b>3.3.</b> of this instruction.  2. Not required for SSOs  X. Refers to a general note found in the individual grading criteria.			

**6.7. General Grading Criteria:** For grading general areas, see **Chapter 3.**

**6.8. Specific Grading Criteria (T-2):**

**6.8.1. AREA 9, Equipment/Systems Knowledge.**

6.8.1.1. **Q.** Satisfactory knowledge of applicable reconnaissance equipment and related systems.

6.8.1.2. **Q-.** Incomplete knowledge of applicable reconnaissance equipment and related systems. Aware of and understands system limitations and cautions.

6.8.1.3. **U.** Unsatisfactory knowledge of applicable reconnaissance equipment and related systems. Unaware of or does not understand system limitations or cautions.  
**NOTE:** Equipment/system discussions may be accomplished at any time prior to the critique. Evaluators must ensure discussions do not interfere with the examinee's crew duties.

**6.8.2. AREA 10, Equipment/Systems Operation**

6.8.2.1. **Q.** Operated equipment effectively. Equipment was operated/configured according to prescribed procedures and directives. Used acceptable commands, search modes and procedures when interfacing with computer-aided systems.

6.8.2.2. **Q-.** Operated equipment hesitantly or slowly, indicating a need for study and/or corrective training. Examinee made minor omissions, deviations, or errors in prescribed procedures and directives. Actions would not have damaged equipment or jeopardized sortie success.

6.8.2.3. **U.** Did not operate/configure equipment in accordance with prescribed procedures and directives. Failed to use acceptable commands, search modes, and procedures when interfacing with computer-aided systems. Examinee made significant omissions, deviations, or errors. Equipment damage could have occurred as a result of operator error/deviation. **NOTE:** This area includes equipment operation, malfunctions, and corrective action procedures.

### 6.8.3. **AREA 12, Tactical Planning**

6.8.3.1. **Q.** Developed a plan considering sortie objectives, specific action points, likely threats and aircraft/crew capabilities. Determined equipment and materials required for planned mission and ensured their availability.

6.8.3.2. **Q-.** As above but with minor errors, deviations or omissions that did not significantly impact the planned mission.

6.8.3.3. **U.** Planning was insufficient to achieve sortie objectives. Major errors, deviations or omissions that significantly impacted the planned mission.

### 6.8.4. **AREA 13, Employment**

6.8.4.1. **Q.** Accomplished planned goals. Applied tactics or operational procedures consistent with mission objectives. Ensured aircraft was properly positioned and/or equipment was adequately configured for data collection IAW mission priorities and timing. Adapted to meet changing mission goals.

6.8.4.2. **Q-.** As above but with minor deviations, omissions or errors which did not prevent accomplishment of planned goals. Slow to adapt to changing goals.

6.8.4.3. **U.** Major deviations, omissions or errors which significantly impacted the accomplishment of planned goals. Applied tactics or operational procedures inconsistent with mission objectives. Failed to ensure aircraft was properly positioned and equipment was adequately configured for data collection. Failed to adapt to changing goals.

### 6.8.5. **AREA 14, Data Collection/Recording**

6.8.5.1. **Q.** Tasked data was intercepted, recorded, and/or annotated. Utilized adequate equipment settings and procedures. No significant data lost. Mission success was not jeopardized.

6.8.5.2. **Q-.** As above with minor omissions, deviations, or errors that did not significantly jeopardize mission success.

6.8.5.3. **U.** Failed to intercept, record, and/or adequately annotate tasked data. Significant deviations or errors. Lost significant data or jeopardized mission success.

**NOTE:** With uncorrectable equipment malfunctions, the operator must attempt to optimize data collection.

**6.8.6. AREA 16, Collection Debrief**

6.8.6.1. **Q.** Satisfactory knowledge and performance of required procedures. Ensured materials were properly accounted for, correctly transferred and accurately debriefed mission to required personnel.

6.8.6.2. **Q-.** As above but with minor errors, deviations or omissions.

6.8.6.3. **U.** Unsatisfactory knowledge of required procedures. Major deviations in procedures. Failed to properly account for and/or transfer materials. Mission debrief to required personnel was omitted or contained major errors/omissions.

## Chapter 7

### AIRBORNE SYSTEMS ENGINEER (ASE) EVALUATIONS

**7.1. General.** Grading criteria contained herein cannot cover every situation. Written parameters must be tempered with sortie objectives, evaluator judgment, and task accomplishment in the determination of overall aircrew performance. Specific requirements for each evaluation are as follows:

#### 7.2. Qualification Evaluations (T-2):

7.2.1. Ground Requisites. See [Table 2.1](#)

7.2.2. Flight Phase. All areas required in [Table 7.1](#) under "QUAL" will be evaluated unless not applicable to the specific aircraft as noted. Make all possible attempts to complete evaluations in-flight. If unable, with 55 OG/CC waiver, the evaluation may be completed using a static aircraft or ATD. All appropriate aircrew members should be present when using a static aircraft to evaluate areas normally performed with crew interaction.

**7.3. Dual Qualification Evaluations (T-2).** When authorized IAW AFIs 11-202V1 and 11-2RC-135V1, to establish or maintain qualification in two different ASE positions on the same MDS, use the following guidance. Dual qualification requires a separate evaluation for each position. Evaluations may be combined on one sortie provided all required grading areas are covered for both positions and a like specialty is available for both positions not to include the evaluator. Further the evaluatee must be current and qualified in both baselines/positions in order to combine these evaluations.

**7.4. Difference Qualifications (T-2).** Difference Qualifications allow an individual to qualify in the same crew position in another MDS/model or in a different tactic/system on the same MDS. Complete difference training and certification IAW AFI 11-2RC-135V1. These evaluations do not update expiration dates.

**7.5. Instructor Evaluations (T-2).** Specific criteria are included in [Chapter 3](#) and [Table 3.2](#)

**7.6. Emergency Procedures Evaluations (EPE) (T-2).** Use the Emergency Procedures criteria to evaluate Emergency Procedures Evaluations. The EPE satisfies the in-flight requirements for Area 4, Emergency Procedures, if no actual emergency procedure is experienced in-flight.

#### 7.7. ASE Evaluation Requirements (T-2):

7.7.1. The table below lists areas for ASE qualification and instructor evaluations.

**Table 7.1. ASE Evaluation Requirements.**

AREA/TITLE	NOTES	QUAL	INSTR
1. Equipment/Publications		R	
2. Mission Planning		R	
3. Checklist Procedures		R	
4. Emergency Procedures		R	

5. Airmanship (Critical)		R	
6. Safety (Critical)		R	
7. Aircrew Discipline (Critical)		R	
8. CRM/Crew Coordination		R	
9. Postflight/Debrief		R	
10. Equipment/Systems Knowledge Block/Schematic Diagrams	1	R	
11. Maintenance and Troubleshooting		R	
12. Communications, Logs, and Reports		R	
13. Instructional Ability	2		R
14. Briefings/Critique	2		R
15. Demonstration and Performance	2		R
<b>NOTES:</b>			
1. Reference paragraph 7.7.2.			
2. Grading criteria IAW paragraph 3.3. of this instruction.			

7.7.2. Because of changing equipment configurations on the RC/OC-135 aircraft, required knowledge and performance levels for the Equipment/Systems Knowledge, Area 10, and Maintenance and Troubleshooting, Area 11, will be identified in the OG evaluation profile letter. The tables in the supplement will be updated as equipment is added or removed from the applicable aircraft.

7.7.2.1. The following definitions will be used as standard levels in the local supplement tables. For qualification evaluations, assign one of these four definitions to each system, subsystem or operation required in Equipment/Systems Knowledge Area. Only systems applicable to the aircraft, system, or position are considered in the evaluation.

7.7.2.1.1. Knowledge level A (System Level): Has knowledge of the overall system. Is required to troubleshoot malfunctions to the degraded system only. After identifying which system is causing the problem, can write an effective entry in the Aircraft Maintenance Forms. Can properly load all magnetic media, crypto, and/or film necessary for system operation.

7.7.2.1.2. Knowledge level B (Subsystem Level): Has knowledge of the subsystems comprising the overall system. Is required to troubleshoot to the malfunctioning subsystem(s). Can identify which subsystem(s) or cable group (or bundle) is causing the problem and can write an effective entry in the Aircraft Maintenance Forms. Can properly load all magnetic media, crypto, and/or film necessary for system operation, and diagnose problems in loading applicable media.

7.7.2.1.3. Knowledge level C (Line Replaceable Unit/Cable Level): Has knowledge of each Line Replaceable Unit (LRU) in a system or subsystem. Is required to troubleshoot to the LRU, cable, or connector. Can accurately identify the malfunctioning LRU, cable, or connector and either remove/replace the LRU, re-seat

the connector, or effect temporary repairs (if the required components are readily available). After performing any maintenance action can place an effective entry in the Aircraft Maintenance Forms.

7.7.2.1.4. Knowledge level D (circuit card (schematic) level): Has knowledge of components within and the cables connecting an LRU. Can troubleshoot to the circuit card or connector pin causing the malfunction. Is able to remove/replace a circuit card/module in an LRU or repair the connector (if required components are readily available). After performing any maintenance action can place an effective entry in the Aircraft Maintenance Forms.

**7.8. General Grading Criteria:** For grading general areas, see [Chapter 3](#).

**7.9. Specific Grading Criteria (T-2):** *NOTE:* See 55th Operations Group Evaluation Profile Letter for specific equipment grading criteria pertaining to Areas 10 and 11.

**7.9.1. AREA 10, Equipment/Systems Knowledge Block/Schematic Diagrams**

7.9.1.1. **Q.** Demonstrated efficient use of applicable publication diagrams in determining system operation or troubleshooting systems, and demonstrated a complete and thorough understanding of systems or subsystems general theory of operation without significant confusion or delays. Can accurately locate and identify equipment on systems or subsystems with no more than minor errors not affecting sortie or troubleshooting success.

7.9.1.2. **Q-.** Demonstrated use of applicable publications showing limited understanding of the use of diagrams in determining system operation or troubleshooting, or demonstrated incomplete/inaccurate understanding of systems or subsystems general theory of operation with some confusion or delays which did not adversely affect the mission or troubleshooting effectiveness. Can locate and identify equipment on systems or subsystems with some errors not seriously affecting sortie or trouble shooting effectiveness.

7.9.1.3. **U.** Failed to demonstrate an ability to utilize applicable publication diagrams for determining system operation or troubleshooting with significant confusion or delays which adversely affected mission or troubleshooting effectiveness. Demonstrated an unacceptable level of understanding of systems or subsystems general theory of operation, or caused significant confusion or delays which adversely affected mission or troubleshooting effectiveness. Unable to locate and identify equipment for evaluated systems or subsystems. Major errors affected sortie or troubleshooting success. *NOTE:* Equipment/Systems Knowledge discussion may be accomplished before, during, or after flight, but must be completed prior to the evaluation critique. The equipment selected to evaluate this area will be selected from the local supplement table(s). A representative sample, as determined by the local table for the platform being evaluated, of each system or subsystem will be evaluated.

**7.9.2. AREA 11, Maintenance and Troubleshooting**

7.9.2.1. **Q.** Performed proper maintenance practices utilizing test and maintenance equipment with minor omissions and deviations not affecting malfunction analysis. Properly attempted to optimize equipment effectiveness.

7.9.2.2. **Q-**. Performed proper maintenance practices utilizing test and maintenance equipment with omissions and deviations that showed a need for additional training. Attempted to optimize equipment effectiveness with some errors which did not affect sortie success.

7.9.2.3. **U**. Performed improper maintenance practices utilizing test and maintenance equipment which adversely affected malfunction analysis. Either did not attempt or improperly attempted to optimize equipment effectiveness which adversely affected sortie success.

## Chapter 8

### CRYPTOLOGIC MISSION CREW (CMC)

**8.1. General:** The criteria contained in this chapter are applicable to qualification flight evaluations for the Cryptologic Mission Crew positions on all RC-135 aircraft. For the purposes of this instruction the CMC is comprised of Airborne Cryptologic Language Analyst (ACLs), Signals Search and Development operators (SSDs), Airborne Mission Supervisors (AMSs), Airborne Analysts (AAs), and Data Link Operators (DLOs). Grading criteria contained herein cannot cover every situation. Written parameters must be tempered with sortie objectives, evaluator judgment, and task accomplishment in the determination of overall aircrew performance. Specific requirements for each evaluation are as follows:

#### 8.2. Qualification Evaluations (T-2):

8.2.1. Ground Requisites: See [Table 2.1](#)

8.2.2. Flight Phase: All areas required in [Table 8.1](#) under ACL, SSD, AMS, AA, DLO will be evaluated, unless not applicable to the specific qualification as noted.

8.2.3. Dual Qualification Evaluations: When authorized IAW AFI 11-202V1 and 11-2RC-135V1, to establish or maintain qualification in two different positions on the same MDS, a separate evaluation is required for each position. Evaluations may be combined on one sortie provided all required grading areas are covered for each position.

8.2.4. Difference Evaluations will be IAW AFI 11-2RC135V1.

**8.3. Instructor Evaluations (T-2).** All areas required in [Table 6.1](#) under "INSTR" will be evaluated.

**8.4. Emergency Procedures Evaluations (EPE) (T-2):** The EPE satisfies the in-flight requirements for Area 4, Emergency Procedures.

**8.5. Evaluation Requirements (T-2):** The table below lists areas for ACL, SSD, DLO, AA, AMS and instructor qualification evaluations.

**Table 8.1. ACL, SSD, DLO, AA, AMS Evaluation Requirements.**

AREA/TITLE	NOTES	ACL	SSD	DLO	AA	AMS	INSTR
1. Equipment/Publications		R	R	R	R	R	
2. Mission Planning		R	R	R	R	R	
3. Checklist Procedures		R	R	R	R	R	
4. Emergency Procedures		R	R	R	R	R	
5. Airmanship (Critical)		R	R	R	R	R	
6. Safety (Critical)		R	R	R	R	R	
7. Aircrew Discipline (Critical)		R	R	R	R	R	



8. CRM/Crew Coordination		R	R	R	R	R	
9. Postflight/Debrief		R	R	R	R	R	
10. Communication, Logs, Reports, and Files		R	R	R	R	R	
11. Operator Workstation Utilization (OWS)		R	R	R	R	R	
12. Graphics Functions		R	R	R	R	R	
13. Search and Acquisition		R	R	R	R	R	
14. Receiver Manipulation		R	R	R	R	R	
15. Geo-location Data		R	R	R	R	R	
16. Track Management		R	R	R	R	R	
17. Recall Operations		R	R	R	R	R	
18. System Applications		R	R	R	R	R	
19. System Capabilities				R	R	R	
20. Crew Management						R	
21. Mission Coordination				R	R	R	
22. Data Link Procedures				R	R	R	
23. Tasking and Reporting				R	R	R	
24. Communications Systems				R	R	R	
25. CAB/ITW	X			R	R	R	
26. Management Specific System Functions				R	R	R	
27. Instructional Ability	1						R
28. Briefing/Critique	1						R
29. Demonstration and Performance	1						R
30. Equipment/Systems Knowledge	X		R				
31. Equipment/Systems Operation	X		R				
32. Signals Collection and Recording (Critical)	X		R				
<b>NOTES:</b>							
1. Grading criteria IAW paragraph <b>3.3.</b> of this instruction.							
X. Refers to a general note found in the individual grading criteria.							

**8.6. General Grading Criteria:** For grading general areas, see [Chapter 3](#).

**8.7. Specific Grading Criteria (T-2):**

**8.7.1. AREA 11, Operator Workstation Utilization.**

8.7.1.1. **Q.** Operator initialized, signed-on, and shutdown the operator workstation in accordance with governing directives. Was able to set-up and manipulate position in an efficient manner. Displayed working knowledge of soft keys, abbreviation keys, OWS diagnostics and workspace manipulation. Only minor deviations were performed not jeopardizing mission success.

8.7.1.2. **Q-.** Operator had difficulties initializing or shutting down position. Had difficulties using OWS diagnostics, setting up position and/or manipulating workspaces. Errors detracted from planned mission accomplishment but had no major effect on mission success.

8.7.1.3. **U.** Operator failed to initialize, shutdown, or manipulate the operator workstation. Major errors and/or deviation degraded mission accomplishment.

**8.7.2. AREA 12, Graphics Functions.**

8.7.2.1. **Q.** Effectively set-up/manipulated graphics equipment and displays considering mission objectives, specific action points, likely threats, and system capabilities. Only minor deviations were performed not jeopardizing mission success.

8.7.2.2. **Q-.** Operator had difficulties manipulating graphics equipment and displays. Deviations detracted from mission objectives, but had no major impact on planned mission success.

8.7.2.3. **U.** Failed to properly set-up or manipulate graphics. Major errors or deviations jeopardized mission success.

**8.7.3. AREA 13, Search and Acquisition.**

8.7.3.1. **Q.** Demonstrated the ability to set, modify, and manipulate automatic and manual assignments as required. Able to display and modify search queues, conduct manual and PAN search and upgrade manual search assignments in accordance with governing directives. Minor errors or deviations did not detract from task accomplishment or the accomplishment of the mission tasking.

8.7.3.2. **Q-.** Had difficulty setting, modifying, or manipulating assignments. Committed minor deviations that did not result in significant data loss or detract from mission success.

8.7.3.3. **U.** Failed to demonstrate the ability to perform the above tasks. Major errors degraded accomplishment of mission tasking and/or jeopardized mission success.

**8.7.4. AREA 14, Receiver Manipulation.**

8.7.4.1. **Q.** Demonstrated the ability to manipulate receiver settings for optimal collection in accordance with governing directives. Manipulated bandwidth, modulation, threshold, center tuning, and antenna settings appropriately. Only minor errors or deviations were performed that did not result in data loss and did not jeopardize accomplishment of mission tasking.

8.7.4.2. **Q-.** Had difficulty manipulating receiver settings. Manipulation problems caused minor loss of collection or loss of situational awareness but did not detract from overall mission success.

8.7.4.3. **U.** Failed to demonstrate the ability to manipulate receivers. Failure resulted in significant data loss which impacted planned mission success. Major errors jeopardized accomplishment of mission tasking.

**8.7.5. AREA 15, Geolocational Data.**

8.7.5.1. **Q.** Demonstrated the ability to take, verify, and manipulate manual and automatic lines of bearing without error. Was able to geo-locate emitters.

8.7.5.2. **Q-.** Had difficulty taking or verifying lines of bearing, manipulating lines of bearing, or geo-locating emitters. Did not detract from planned mission accomplishment.

8.7.5.3. **U.** Failed to demonstrate the ability to take and verify manual and automatic lines of bearing on assigned frequencies or was unable to geo-locate emitters. Jeopardized planned mission success.

**8.7.6. AREA 16, Track Management.**

8.7.6.1. **Q.** Demonstrated the ability to read, interpret, manipulate and amplify tracks and track data. Maintained situational awareness through efficient use of data display options and dynamic queue usage. Was able to use available resources to assist in the identification of unknown tracks.

8.7.6.2. **Q-.** Had difficulty accomplishing the above tasks. Committed minor deviations or omissions that did not detract from planned mission success.

8.7.6.3. **U.** Was unable to demonstrate efficient track management procedures. Was unable to complete above tasks. Errors or deviations detracted from planned mission success.

**8.7.7. AREA 17, Recall Operations.**

8.7.7.1. **Q.** Demonstrated the ability to perform audio recall, and release an assigned Recall Identification Number (IDNO). Minor errors or omissions did not detract from task accomplishment.

8.7.7.2. **Q-.** As above but with omissions, errors, or deviations that detracted from task accomplishment but did not jeopardize mission tasking.

8.7.7.3. **U.** Failed to demonstrate proficiency on most of the above items. Errors, deviations, or omissions jeopardized accomplishment of mission tasking.

**8.7.8. AREA 18, System Applications.**

8.7.8.1. **Q.** Demonstrated the ability to effectively utilize system applications to enhance mission accomplishment. Used system applications, dynamic system files, technical databases and help files as required. Minor errors or omissions did not detract from task accomplishment.

8.7.8.2. **Q-.** As above but with omissions, errors, or deviations that detracted from task accomplishment but did not jeopardize mission tasking.

8.7.8.3. **U.** Failed to demonstrate proficiency on most of the above items. Errors, deviations, or omissions jeopardized accomplishment of mission tasking.

**8.7.9. AREA 19, System Capabilities.**

8.7.9.1. **Q.** Demonstrated satisfactory knowledge of system capabilities, major and minor processors, sub-processors, receiver configuration and usage, and back-up/redundant systems with minor deviations, omissions, or errors which did not detract from mission success.

8.7.9.2. **Q-.** Demonstrated satisfactory knowledge of system capabilities, major and minor processors, sub-processors, receiver configuration and usage, and back-up/redundant systems with minor errors, omissions, or deviations which detracted from mission accomplishment but did not jeopardize mission success.

8.7.9.3. **U.** Failed to demonstrate knowledge of system capabilities, major and minor processors, sub-processors, receiver configuration and usage, and back-up/redundant systems. Major errors, omissions, or deviations jeopardized mission success.

**8.7.10. AREA 20, Crew Management.**

8.7.10.1. **Q.** Applied effective crew management concepts. Responded appropriately to unpredictable situations, crew illness, system malfunctions, divert/Remain Over Night (RON) situations, etc. Effectively managed RC-135 aircrew with minor omissions, deviations or errors.

8.7.10.2. **Q-.** Same as above but omissions, deviations, or errors detracted from planned mission success.

8.7.10.3. **U.** Did not apply crew management concepts. Failed to respond to unpredictable situations, crew illness, system malfunctions, divert/RON procedures, etc. Mismanaged aircrew jeopardizing mission success.

**8.7.11. AREA 21, Mission Coordination.**

8.7.11.1. **Q.** Effectively coordinated with off-board agencies, controlling authorities and platforms, and demonstrated adequate knowledge of their functions. Provided timely direction or information as required which clarified/rectified a situation.

8.7.11.2. **Q-.** Adequately coordinated with off-board agencies, controlling authorities and platforms but demonstrated limited knowledge of their functions. Showed some hesitation to provide timely direction/information which would have clarified confusion or rectified a situation.

8.7.11.3. **U.** Coordination with off-board agencies, controlling authorities and platforms and lack of knowledge of their functions/responsibilities was detrimental to flying safety or mission effectiveness. Did not provide timely direction/information that would have clarified/rectified a situation.

**8.7.12. AREA 22, Data Link Procedures.**

8.7.12.1. **Q.** Demonstrated adequate knowledge of data link processors, systems, and net procedures. Performed Data Link operations as required. Minor deviations or errors did not detract from mission accomplishment.

8.7.12.2. **Q-**. Demonstrated limited knowledge of data link processors, systems, and net procedures. Omissions, errors or deviations detracted from mission accomplishment but did not jeopardize mission accomplishment.

8.7.12.3. **U**. Failed to demonstrate adequate knowledge of data link processors, systems, and net procedures. Deviations, errors, or omissions jeopardized mission success.

**8.7.13. AREA 23, Tasking and Reporting.**

8.7.13.1. **Q**. Based on tasking, flight manuals, and applicable directives, effectively accomplished mission tasking and required reporting.

8.7.13.2. **Q-**. Did not comply with all applicable tasking, flight manuals, and directives. Minor errors, omissions or deviations in applying tasking and reporting guidance detracted from mission accomplishment but did not jeopardize mission success.

8.7.13.3. **U**. Failed to comply with applicable tasking, flight manuals, and directives. Major errors, omissions, or deviations jeopardized mission success.

**8.7.14. AREA 24, Communications Systems.**

8.7.14.1. **Q**. Effectively operated communications equipment to satisfy mission requirements.

8.7.14.2. **Q-**. Operated communications equipment with minor errors, omissions, or deviations, which affected mission accomplishment but did not jeopardize mission success.

8.7.14.3. **U**. Failed to effectively operate communications equipment. Major errors, omissions or deviations jeopardized mission success.

**8.7.15. AREA 25, CAB/ITW.**

8.7.15.1. **Q**. Recognized situations requiring Combat Advisory Broadcast/Imminent Threat Warning (CAB/ITW) and took appropriate action. Demonstrated knowledge of common terminology, combat terminology, code words, authentication methods, brevity usage, and possessed general radio discipline.

8.7.15.2. **Q-**. Slow to recognize situations requiring CAB/ITW or hesitated to take appropriate action. Poor knowledge of common terminology, combat terminology, code words, authentication methods, brevity usage, and general radio discipline.

8.7.15.3. **U**. Failed to recognize situations requiring CAB/ITW and/or failed to take appropriate action. Exceeded Q- criteria. Errors, omissions, or deviations jeopardized mission success or another platform's mission success. **NOTE:** An area grade of U for this area will result in qualification level 2 (highest attainable grade) with required post evaluation training.

**8.7.16. AREA 26, Management Specific System Functions.**

8.7.16.1. **Q**. Demonstrated the ability to display, manipulate, and interpret processor and subsystem information, monitored operator activities, system status, and frequency assignment status and other management functions as required. Made conclusions on data received and took appropriate actions with minor omissions, deviations, or errors that did not detract from mission success.

8.7.16.2. **Q-** Same as above but with omissions, deviations, or errors which detracted from mission success.

8.7.16.3. **U.** Unable to display, manipulate or interpret processor and subsystem information, or monitor operator activities, system status, or frequency assignment status or other management functions. Omissions, deviations, or errors jeopardized mission success.

**8.7.17. AREA 30, Equipment/System Knowledge.**

8.7.17.1. **Q.** Demonstrated satisfactory knowledge of applicable SSD equipment and related systems.

8.7.17.2. **Q-** Demonstrated incomplete knowledge of applicable SSD equipment and related systems. The lack of knowledge did not detract from mission success.

8.7.17.3. **U.** Demonstrated unsatisfactory knowledge of applicable SSD equipment and related systems. Unaware of or does not understand system limitations or cautions. **NOTE:** Equipment/system discussions may be accomplished at any time prior to the critique. Evaluators must ensure discussions do not interfere with the examinee's crew duties.

**8.7.18. AREA 31, Equipment/System Operations.**

8.7.18.1. **Q.** Operated equipment effectively. Equipment was operated/configured according to prescribed procedures and directives. Used acceptable commands, search modes and procedures when interfacing with computer-aided systems.

8.7.18.2. **Q-** Operated equipment hesitantly or slowly, indicating a need for study and/or corrective training. Examinee made minor omissions, deviations, or errors in prescribed procedures and directives. Actions would not have damaged equipment or jeopardized sortie success.

8.7.18.3. **U.** Did not operate/configure equipment in accordance with prescribed procedures and directives. Failed to use acceptable commands, search modes, and procedures when interfacing with computer-aided systems. Examinee made significant omissions, deviations, or errors. Equipment damage could have occurred as a result of operator error/deviation. **NOTE:** This area includes equipment operation, malfunctions, and corrective action procedures.

**8.7.19. AREA 32, Signals Collection and Recording. (CRITICAL)**

8.7.19.1. **Q.** Tasked signal(s) was intercepted, recorded, and annotated. Utilized adequate equipment settings and procedures. No significant signal collection lost. Mission success was not jeopardized.

8.7.19.2. **U.** Failed to intercept, record, and/or adequately annotate tasked signals. Significant deviations or errors. Lost significant data or jeopardized mission success. **NOTE:** With uncorrectable equipment malfunctions, the operator must attempt to optimize data collection.

## Chapter 9

### INFORMATION INTEGRATION OFFICER (IIO) EVALUATIONS

**9.1. General:** Grading criteria contained herein cannot cover every situation. Written parameters must be tempered with sortie objectives, evaluator judgment, and task accomplishment in the determination of overall aircrew performance. Specific requirements for each evaluation are as follows:

**9.2. Qualification Evaluations (T-2):**

9.2.1. Ground Requisites: See [Table 2.1](#)

9.2.2. Flight Phase: All areas required in [Table 9.1](#) under "IIO" will be evaluated.

**9.3. Instructor Evaluations (T-2).** All areas required in [Table 9.1](#) under "INSTR" will be evaluated. General grading criteria is located in [Chapter 3](#). Initial instructor checks will be completed during flight.

**9.4. Emergency Procedures Evaluations (EPE) (T-2):** The EPE satisfies the in-flight requirements for Area 4, Emergency Procedures.

**9.5. IIO Evaluation Requirements (T-2):** The table below lists areas for IIO qualification and instructor evaluations.

**Table 9.1. IIO Evaluation Requirements:**

AREA/TITLE	NOTES	IIO	INSTR
1. Equipment/Publications		R	
2. Mission Planning		R	
3. Checklist Procedures		R	
4. Emergency Procedures		R	
5. Airmanship (Critical)		R	
6. Safety (Critical)		R	
7. Aircrew Discipline (Critical)		R	
8. CRM/Crew Coordination		R	
9. Postflight/Debrief		R	
10. Communication, Logs, Reports, and Files	2	R	
11. Operator Workstation	2	R	
12. Graphics Functions	2	R	
13. Geolocational Data	2	R	
14. Track Management	2	R	
15. Search and Acquisition	2	R	

16. Intelligence System Application	2	R	
17. National/Tactical Integration	2	R	
18. Multi-Intelligence Fusion and Analysis	2	R	
19. Battle Space Awareness	2	R	
20. Instructional Ability	1		R
21. Briefing/Critique	1		R
22. Demonstration and Performance	1		R
<b>NOTES:</b> 1. Grading criteria IAW paragraph 3.3. of this instruction.  2. Not required for SSOs			

**9.6. General Grading Criteria:** For grading general areas, see [Chapter 3](#).

**9.7. Specific Grading Criteria (T-2):**

**9.7.1. AREA 11, Operator Workstation.**

9.7.1.1. **Q.** Initialized, signed-on, and shutdown the operator workstation in accordance with governing directives. Was able to set-up and manipulate position in an efficient manner. Displayed working knowledge of basic system functions. Connected and configured IIO-specific equipment without assistance. Only minor deviations were performed not jeopardizing mission success.

9.7.1.2. **Q-.** Had difficulties initializing or shutting down position/laptop. Had difficulties setting up position and/or manipulating workspaces. Errors detracted from planned mission accomplishment but had no major effect on mission success.

9.7.1.3. **U.** Failed to initialize, shutdown, or manipulate the operator workstation/IIO laptop. Major errors and/or deviation degraded mission accomplishment.

**9.7.2. AREA 12, Graphics Functions.**

9.7.2.1. **Q.** Effectively set-up/manipulated graphics equipment and displays considering mission objectives, specific action points, likely threats, and system capabilities. Only minor deviations were performed not jeopardizing mission success.

9.7.2.2. **Q-.** Had difficulties manipulating graphics equipment and displays. Deviations detracted from mission objectives but had no major impact on planned mission success.

9.7.2.3. **U.** Failed to properly set-up or manipulate graphics. Major errors or deviations jeopardized mission success.

**9.7.3. AREA 13, Geolocational Data.**

9.7.3.1. **Q.** Demonstrated the ability to display manual and automatic lines of bearing without error and was able to query geolocation of emitters without assistance for fusion of analysis and dissemination. Able to plot and convert locations into different formats as well as describe RC-135 geolocation capabilities and limitations.



9.7.3.2. **Q-** Had difficulties displaying manual and automatic lines of bearing. Required assistance to display geolocation of emitters as well as plot and convert locations into different formats. Did not detract from planned mission accomplishment.

9.7.3.3. **U.** Failed to demonstrate the ability to display manual and automatic lines of bearing or geolocation of emitters. Jeopardized planned mission success.

**9.7.4. AREA 14, Track Management.**

9.7.4.1. **Q.** Demonstrated the ability to read, interpret, manipulate and amplify tracks and track data. Maintained situational awareness through efficient use of data display options and dynamic queue usage. Was able to use available resources to assist in the identification of unknown tracks.

9.7.4.2. **Q-** Had difficulty accomplishing the above tasks. Committed minor deviations or omissions that did not detract from planned mission success.

9.7.4.3. **U.** Was unable to demonstrate efficient track management procedures. Was unable to complete above tasks. Errors or deviations detracted from planned mission success.

**9.7.5. AREA 15, Search and Acquisition.**

9.7.5.1. **Q.** Demonstrated the proficiency to set, modify, and configure audio assignments as required. Effectively described collection and QRC systems processing capabilities. Minor errors or omissions did not detract from task accomplishment.

9.7.5.2. **Q-** As above but with omissions, errors, or deviations that detracted from task accomplishment but did not jeopardize mission tasking.

9.7.5.3. **U.** Failed to demonstrate proficiency on most of the above items. Errors, deviations, or omissions jeopardized accomplishment of mission tasking.

**9.7.6. AREA 16, Intelligence System Application.**

9.7.6.1. **Q.** Demonstrated the proficiency in configuring appropriate intelligence and collaboration system applications. Successfully established network connectivity and applied effective troubleshooting procedures with only minor deviations, omissions or errors, which did not detract from mission success.

9.7.6.2. **Q-** Demonstrated satisfactory knowledge of intelligence system application, establishing network connectivity and applying troubleshooting procedures with minor errors, omissions or deviations which detracted from mission accomplishment but did not jeopardize mission success.

9.7.6.3. **U.** Failed to demonstrate satisfactory knowledge of intelligence system application, establishing network connectivity and applying troubleshooting procedures. Major errors, omissions, or deviations jeopardized mission success.

**9.7.7. AREA 17, National/Tactical Integration.**

9.7.7.1. **Q.** Effectively coordinated with off-board agencies, controlling authorities, other ISR platforms, and demonstrated adequate knowledge of their functions. Provided timely direction or information as required to off-board entities and on-board crewmembers which clarified/rectified a situation.

9.7.7.2. **Q-.** Adequately coordinated with off-board agencies, controlling authorities, and platforms but demonstrated limited knowledge of their functions. Showed some hesitation to provide timely direction/information which would have clarified confusion or rectified a situation.

9.7.7.3. **U.** Coordination with off-board agencies, controlling authorities, and platforms and lack of knowledge of their functions/responsibilities was detrimental to flying safety or mission effectiveness. Did not provide timely direction/information that would have clarified/rectified a situation.

**9.7.8. AREA 18, Multi-Intelligence Fusion and Analysis.**

9.7.8.1. **Q.** Effectively extracted intelligence information for fusion, analysis and dissemination. Made analytical conclusion(s) relevant to mission or examiner provided data and communicated analytical conclusion(s) with appropriate compartment head and/or external agencies. Minor errors or deviations did not detract from task accomplishment or the accomplishment of mission tasking.

9.7.8.2. **Q-.** Minor errors, omissions, or deviations in extracting intelligence data for fusion, analysis and/or dissemination detracted from effective mission accomplishment but did not jeopardize mission success.

9.7.8.3. **U.** Failed to comply with applicable procedures pertaining to effective multi-intelligence fusion and analysis. Major errors, omissions, or deviations jeopardized mission success.

**9.7.9. AREA 19, Battle Space Awareness.**

9.7.9.1. **Q.** Demonstrated proficiency in task prioritization and maintained good situational awareness. Minor errors or temporary loss of situational awareness did not detract from task accomplishment or the accomplishment of mission tasking.

9.7.9.2. **Q-.** Committed minor errors or experienced temporary loss of situational awareness which affected mission accomplishment but did not jeopardize mission success.

9.7.9.3. **U.** Errors, deviations, failure to effectively prioritize tasks and loss of situational awareness jeopardized mission success.

TOD D.WOLTERS, Lt Gen, USAF  
Deputy Chief of Staff for Operations

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 11-4, *Aviation Service*, September 1, 2004

AFI 11-2RC-135V1, *RC/OC/WC/TC-135 Aircrew Training*, July 17, 2009

AFI 11-2RC-135V3IC2, *RC/OC/WC/TC-135 Operations Procedures*, February 28, 2013

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, January 19, 2012

AFI 11-202 Vol 2, *Aircrew Standardization/Evaluation Program*, September 13, 2010

AFI 11-215\_ACCSUPI, *USAF Flight Manuals Program (FMP)*, August 31, 2011

AFI 33-360, *Publications and Forms Management*, February 11, 2013

AFI 11-401\_ACCSUP\_I, *Aviation Management*, 25 March 2013

AFMAN 33-363, *Management of Records*, March 1, 2008

ATP-56(B), *Air to Air Refueling*, January 22, 2010

***Adopted Forms***

AF Form 8, *Certificate of Aircrew Qualification*

AFTO 781, *ARMS Aircrew/Mission Flight Data Document*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1381, *USAF Aircrew Certification*.

***Abbreviations and Acronyms***

**AA**—Airborne Analyst

**AC**—Aircraft Commander

**ACC**—Air Combat Command

**ACL**—Airborne Cryptologic Language Analyst

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**ARMS**—Aviation Resource Management System

**AMS**—Airborne Mission Supervisor

**ANG**—Air National Guard

**A/R**—Air Refueling

**ASE**—Airborne Systems Engineer

**ATC**—Air Traffic Control

**ATD**—Aircraft Training Device  
**AWACS**—Airborne Warning and Control System  
**CAB/ITW**—Combat Advisory Broadcast/Imminent Threat Warning  
**CCTS**—Combat Crew Training School  
**CFIC**—Central Flight Instructor Course  
**CG**—Center of Gravity  
**CMC**—Cryptologic Mission Crew  
**CRM**—Crew Resource Management  
**DA**—Decision Altitude  
**DLO**—Data Link Operators  
**EPE**—Emergency Procedure Evaluation  
**EPR**—Engine Pressure Ratio  
**ETA**—Estimated Time of Arrival  
**EWO**—Electronic Warfare Officer  
**FAF**—Final Approach Fix  
**FCG**—Foreign Clearance Guide  
**FE**—Flight Examiner  
**FLIP**—Flight Information Publication  
**GP**—Glide Path  
**GPS**—Global Positioning System  
**HQ**—Headquarters  
**IAW**—In Accordance With  
**IDNO**—Identification Number  
**IFF**—Identification, Friend or Foe  
**ILS**—Instrument Landing System  
**IN**—Instructor Navigator  
**INS**—Inertial Navigation System  
**INSTM**—Instrument  
**INSTR**—Instructor  
**IP**—Instructor Pilot  
**IRC**—Instrument Refresher Course  
**JSTARS**—Joint Surveillance and Target Attack Radar System

**LEP**—List of Effective Pages

**LOP**—Line of Position

**LRU**—Line Replaceable Unit

**MAJCOM**—Major Command

**MAP**—Missed Approach Point

**MDS**—Mission Design Series (i.e., RC-135, KC-10, E-8 etc.)

**MOB**—Main Operating Base

**NAF**—Numbered Air Force

**NM**—Nautical Mile

**N/N**—No-notice

**OFT**—Operational Flight Trainer

**OG**—Operations Group

**OG/CC**—Operations Group Commander

**OGV**—Operations Group Standardization/Evaluation

**OPR**—Office of Primary Responsibility

**PAR**—Precision Approach Radar

**QUAL**—Qualification

**RON**—Remain Over Night

**RVCT**—RV Control Time

**SIF**—Selective Identification Feature

**SIMCERT**—Simulator Certification

**SSD**—Special Signals Development operators

**STAN/EVAL**—Standardization and Evaluation

**TAPR**—Training Accomplishment Report

**TC**—Tactical Coordinator

**TDY**—Temporary Duty

**T/O**—Take-off

**TOLD**—Take Off and Landing Data

**TVC**—Training Value Code

**VFR**—Visual Flight Rules

*Terms*

**Airborne Systems Engineer (ASE)**—The generic term for the OC-135 and RC-135S/U/V/W reconnaissance system maintenance technicians. ASE requirements apply to all ASE positions unless otherwise directed.

**Aircraft Commander (AC)**—Pilot who has been certified to perform "pilot-in-command" duties.

**Airmanship**— An aircrew member's continuous perception of self and aircraft in relation to the dynamic environment of flight, threats, and tasking, and the ability to forecast, then execute, tasks based on that perception.

**Copilot (C)**—Pilot qualified to perform duties in the right seat only.

**Critical Phases of Flight**—Take-off, air refueling, approach to landing, landing, a CCTS/CFIC only maneuver, or any flight maneuver specifically requiring immediate access to controls. Approaches to planned missed approaches and air refueling rendezvous are not considered critical phases of flight.

**Deviation**—Performing an action not in sequence with current procedures, directives, or regulations. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative deviations will be considered in determining the overall qualification level.

**Error**—Departure from standard procedure. Performing incorrect actions or recording inaccurate information.

**Flight Examiner/Evaluator**—A crew member designated to administer evaluations.

**Instructor**—Crew member trained, qualified, and certified by the squadron commander as an instructor to perform both ground and in-flight training.

**Instructor Supervision**—When a current instructor, who is qualified in the same crew position, supervises a maneuver or training event. For critical phases of flight, the instructor pilot must occupy one of the seats/stations, with immediate access to the controls.

**Major (deviation/error/omission)**— Detracted from task accomplishment, adversely affected use of equipment, or violated safety.

**Minor (deviation/error/omission)**— Did not detract from task accomplishment, adversely affect use of equipment, or violate safety.

**Omission**— To leave out a required action or annotation.

**Simulated Engine Failure During Takeoff or Climbout After Takeoff**—Practice procedure simulating engine failure after a take-off or touch-and-go. Follow aircraft specific procedures in AFI 11-2RC-135, Vol 3 and aircraft tech orders.

**Supervised training status**—Crew member will fly under instructor supervision as designated by the squadron commander or evaluator.

**Training Devices**—All trainers, computer assisted instruction, sound-on-slide programs, videos, and mockups designed to prepare students for flight training or augment prescribed continuation training.